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Note

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PROSPERITY AND DEBT IN THE PUNJAB

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LATELY OFFICIATING REGISTRAR OF CO-OPERATIVE
SOCIETIES, PUNJAB

It has been said that nowhere in the world will you find a prosperous and contented peasantry. A perusal of the Land Revenue Reports of the last 15 years suggests that the Punjab is perhaps the exception that proves the rule. But this was not always so. Twenty years ago things agrarian provoked deep anxiety and clashing views. The agriculturist was losing his hold upon the land. Indebtedness was increasing. The area redeemed was always less than the area mortgaged; and the money-lender was master of the situation. At last, in 1901,¹ after much enquiry and searching of heart, when even the Revenue pundits had nothing more to say, the bull was taken by the horns and the Land Alienation Act was passed. This Act has rightly been termed the Magna Carta of the cultivator. To him it is the only Act that matters. He can no longer be ousted from his land, and he is no longer as wax

¹ The Act came into force in 1902.

in the hands of the usurer. With it too has come a new era of prosperity. The price of land, in spite of the Act's restrictions, has doubled. In some areas it has increased fourfold. Credit has expanded, prices have risen and a widely extended system of irrigation has made famine well nigh impossible. Finally, and this is a point that all official reports stress, since the Act came into force the area redeemed has almost invariably exceeded the area mortgaged. Prosperity therefore reigns, and the Revenue expert, no longer anxious, sees his work that it is good. Such is the impression made by the official reports and reviews of the last 15 years. It is a picture almost without shadow, and it must be admitted that such pictures are apt to be unreal; but then it is a picture of prosperity, and in the imagination at least prosperity has no serious shadows.

Turning now to the statistical statements that accompany the official reports we are suddenly confronted by the unexpected fact that throughout this period indebtedness has steadily increased.¹ In 15 years (1903 to 1917) the net increase in the mortgage debt of the Province exceeds 10 crores of rupees. Of this nearly $9\frac{1}{2}$ crores falls upon owners and shareholders. Dividing the 15 years into periods of five years each, the figures in lakhs are as follows:—

	<i>Rs. lakhs</i>
1903-7 ...	161
1908-12 ...	231
1913 ² -17 ...	541

I have excluded the amounts for which tenants are responsible, as this article will deal exclusively with owners and share-holders. It will be seen that

¹ Some deduction must be made on account of mortgages which at the end of a fixed period are automatically extinguished, but informal enquiry suggests that in most districts this form of mortgage is uncommon.

² Figures for the year 1917-18 were not available when this article was written.

there is a rapid rise in the figures of the last 5 years. If indeed only the last three years are taken, the increase is startling, being nearly 4 crores of rupees. This is actually more than the amount for three years immediately preceding the introduction of the Land Alienation Act when the increase was only 3.11 crores.¹ This is the more striking as two years of the earlier period were years of famine and only one was a good year, whereas of the last three years the worst (1916) is officially described as 'unfavorable' while the last (1915) is called "a record year".

It is curious that so remarkable an economic phenomenon as this steadily increasing indebtedness,² vitally affecting the condition of over 3½ million proprietors, should have passed almost unnoticed. Indeed diligent search through the official reports of 20 years has discovered only one or two allusions to the fact that the money borrowed by mortgage exceeds the amount discharged by redemption. Yet for over 20 years this has invariably happened. In 1896 it was admitted that indebtedness was rapidly increasing, but after that there is no further reference till 1910. In that year the redemption of 415,000 acres for 2 crores and the mortgage of a much smaller area for 2½ crores is cited as evidence of the increased value of land. The more important point that it is also evidence of increased indebtedness is ignored. In 1913 there is a final allusion. In that year net mortgage debt rose by over 72 lakhs. The fact is recorded, but without comment. On the other hand throughout this period there are innumerable references to the fact that the area redeemed exceeds the area mortgaged and again and again, with almost ritualistic repetition,

¹ North West Frontier province excluded.

² Some deduction must be made from the figures given above on account of mortgages to non-agriculturists, which under the Land Alienation Act are automatically extinguished after 20 years without payment. Informal inquiry however suggests that the deduction to be made on this account is small.

the subject is made matter for congratulation. Doubtless acreage is an important consideration, but after all the prime object of a mortgage is money. If more and more money is raised by mortgage, the fact that at the same time the area under mortgage is decreasing does not justify unmixed congratulation. The official review of 1915 remarks that "it is very satisfactory to find that not only the proportion, but the actual area, of land under mortgage is now less than in any year of which we have a record." Yet in this year net mortgage indebtedness increased by well over a crore of rupees. In the following year the increase is 140 lakhs, the highest figure ever recorded for the Province. Turning to the year's report for some explanation of this we find the bare statement that "it is the first time in the last five years that the area mortgaged has exceeded the area redeemed". In 1917¹ the last year under report, the increase is only two lakhs less. This time we are promised an investigation, not however because for 20 years debt has steadily increased, but because, for the second year running the area mortgaged exceeds the area redeemed.

In this connection there is a further point to note. Recent enquiries into the indebtedness of members of co-operative societies in the Punjab, who may be regarded as typical of the proprietors of the Province, suggest that one rupee of mortgage debt means at least another rupee of unsecured debt as well: that is to say, that to estimate total indebtedness the mortgage debt should be doubled. This would mean that during the last five years the total indebtedness of owners and shareholders has increased by eleven crores, or over £7,000,000. For ten years the figures would be well over

¹This article was written in November 1918. The report for the year 1918 is, however, no exception to what has been said above. Net mortgage debt in 1918 appears to have increased by over 150 lakhs making a total increase of 430 lakhs for the last three years (1916-18).

£10,000,000.¹ In 1896 Sir Frederick Nicholson estimated the total debt of the Madras Presidency, which in population is now twice as big as the Punjab, at £20,000,000. An increase of £10,000,000, in ten years is therefore considerable, and the more surprising that the period is one of undoubted prosperity. It would seem that after all prosperity had its shadow, and that perhaps in India prosperity and debt go hand in hand. Before we come to any conclusion upon the subject, however, we must try and ascertain why indebtedness has increased.

In the face of the almost total silence of the official reports this must naturally be a matter of considerable difficulty. Statistical statements are indeed the only guide. There are plenty of these. Their name in fact is Legion; but as a guide they have something of the erratic nature of the first possessor of that name. It is not only that all statistics may easily mislead; but these in particular have been collected for a purpose which is quite different from ours and under conditions which are constantly changing. Thus in the last twenty years two new Provinces have been carved out of the Punjab, the North West Frontier in 1900, and Delhi in 1912. Allowances too have to be made for changes in district boundaries, and a final difficulty is the elusiveness of certain statements which occasionally disappear from one report to reappear in another. The field of Indian economics resembles a vast jungle through which as yet there is no pukka road, but only tortuous and not very obvious paths. It was therefore a temptation at this point to draw back and leave it to those more expert in statistics and economics to align the road. This attitude, however, never led to either adventure or discovery. I have therefore ventured, hoping that others may be tempted to follow in

¹ The exchange is taken at 1s. 4d. At 2s. the amounts would be £11,000,000 £15,000,000 respectively.

my track, and that so doing they may find the path less tortuous or at least more obvious than before.

The first point to note is that in the last five years, with the unimportant exception of Simla, every district in the Province shows an increase in net mortgage debt, and even in the preceeding five years, when the increase was much less, only four¹ districts show a decrease, which too is no more than a total of 6½ lakhs. It is clear therefore that the increase in debt is widespread, though in the North-Western Districts it is less marked than elsewhere.

There are 28 districts in the Province, and as it is impossible within the narrow compass of an article to examine the conditions prevailing in each, I propose to take the worst cases, in the hope that where the malady is most pronounced the symptoms may be most evident. There are no fewer than nine districts, representing about one-third of the Punjab, in which during the last five years the increase in mortgage debt exceeds 20 lakhs. The figures, which are in lakhs of rupees, are as follows; and to show the rate of increase figures for the preceding five years are given as well :—

		1908-12	1913-17	Total.
		Rs.	Rs.	Rs.
Ferozepore	...	34,75	76,34	111,09
Amritsar	...	29,08	49,22	78,30
Sialkot	...	16,56	37,65	54,21
Lahore	...	21,43	28,29	49,72
Gurdaspur	...	14,05	31,68	45,73
Lyallpur	...	1,13	43,38	44,51
Hoshiarpur	...	12	29,13	41,12
Ludhiana	...	17,09	22,87	39,96
Jullundar	...	1,87	26,06	27,93

As there will be frequent references to these districts, a word may be said about each. Three of them, Sialkot, Gurdaspur and Hoshiarpur, are sub-

¹ Gujranwala, Montgomery, Multan, and Dera-Ghazi-Khan.

montane districts, highly cultivated, thickly populated and blessed with a good rainfall. Jullundur, Amritsar and Lahore belong to the Central Punjab, and are the home of the Sikh Jat, an excellent cultivator if somewhat extravagant in habit. Like the sub-montane districts they* are highly cultivated, but being more irrigated are even more densely populated. The connection between irrigation and population is worth noting. Ludhiana is south of the Sutlej, and broadly speaking resembles the central districts, enjoying however less irrigation, but more rain. These districts are the home of the small proprietor whose average cultivated holding varies from 10 acres in Lahore to $3\frac{3}{4}$ acres in Jullundur. Excluding Lahore, the maximum average is only 6 acres. There remain the two districts of Ferozepore and Lyallpur. In these areas cultivated holdings are for the most part larger, the average being 15 acres in Ferozepore and nearly 20 in Lyallpur. In Ferozepore large holdings prevail because the rainfall is too scanty to permit of a large population. Lyallpur is too well known to need description. It is of course the most famous of the Punjab Canal colonies. On the whole these nine districts are typical of economic conditions in the Punjab, which is a province of small proprietors, with here and there a district of larger holdings. In only one district out of the 28 (namely, Hissar) does the average cultivated holding exceed 20 acres, and in 19 it is less than 8 acres. For the whole Province the average is $7\frac{1}{2}$ acres.

The district that shows the greatest increase in mortgage debt is Ferozepore. In ten years it has risen by over a crore of rupees. In two other districts, Amritsar and Sialkot, the increase exceeds 50 lakhs. Assuming, as before, that total indebtedness is not less than double the mortgage debt, we find

that as many as eight districts each show an increase of over £500,000.¹ In Ferozepore the amount is nearly £1,500,000.² As there are in the district about 150,000 owners and shareholders, this means an average increase of £10, or Rs. 150, per head, which, as money counts in India, is considerable. A report³ of 1908 touches upon the subject, and though it is not very recent it is worth quoting as, so far as can be discovered, it is the only explanation of the increase in debt that the reports for the last 20 years offer for any part of the Punjab. "Owing", says the Deputy Commissioner of Ferozepore "to the habit of excessive drinking in some cases and to gambling in others the people mortgage their lands first to one, then to another for increased consideration, and again to a third person for a further increase during the course of the same year; and this fact alone accounts for the high figures under the head mortgage and redemption of mortgage." And he goes on to point out that at the same time a combination of good harvests and high prices for grain had led to an abnormal rise in the value of land, the implication being that this sudden access of prosperity in facilitating mortgage had led to an increase in debt. Here then prosperity and debt would appear to be intimately connected, and what is more serious, to have led to demoralizing⁴ habits. As such the case is a warning to those superficial economists who regard material prosperity as the remedy of all evil. It would be unwise, of course, to apply this instance from a single district to the whole Province. At the same

¹ 75 p c must be added at present exchange (2s. 4d.)

² Further enquiry suggests that Ferozepore is an exception to the general rule, that total debt is not less than double the mortgage debt. The latter appears in this district to be much heavier than unsecured debt. Even so the increase can hardly be less than 1½ crores, which at present exchange is equal to £1,500,000 (September, 1919).

³ Land Alienation Act Report.

⁴ The Assessment Reports of the district (1912-14) also speak of "extravagance and dissipation" as prominent causes of debt.

time the fact that in the district which shows the most abnormal increase of debt the phenomenon has been connected with demoralizing habits, shows the importance of the subject and the need of enquiring into the phenomenon as a whole.

Ordinarily, where small proprietors are concerned, the main causes of indebtedness are: (1) bad seasons, (2) increase of population without a corresponding increase in production, (3) expansion of cultivation, (4) splitting up of holdings, (5) purchase of land on credit, (6) high prices, and (7) facile credit. There are other causes such as intensive agriculture, which demands more capital, and the power of the usurer; but for our present purpose these can be ignored, as intensive agriculture in the modern sense hardly yet exists, while the usurer is hardly ever absent. Thanks to the establishment of nearly 6000 Co-operative Credit Societies his power in the Punjab is decidedly less than it was 10 years ago, so that we can hardly look to him for an explanation of the rise in debt. To ascertain this we must now examine each of the causes given above as briefly as such complicated questions allow.

Bad Seasons

The first cause is bad seasons, or to speak more accurately, though less simply, seasonal vicissitudes, as it is not only the bad seasons that run the cultivator into debt, but also their great fluctuations. In India, outside the great irrigated areas, the harvest is a gamble in rain, and this produces the gambler's habits. The Indian cultivator, therefore, is not noted for thrift. Moreover when holdings are small, even a moderate harvest may compel a man to borrow, and if interest is high it may be difficult to pay off the debt in a good harvest. The moderate harvest occurs more

frequently than is supposed. Even in districts with a good rainfall like Gurdaspur and Sialkot, the rain is apt to come at the wrong time or in too great abundance, with the result that there may be a succession of harvests none of which will be good and none positively bad. This has certainly been the case in Gurdaspur, and has probably had much to do with the increase of 32 lakhs in the mortgage debt of the district during the last five years. The small owner there is not a man of business. In a good year he lives well. In a poor year he borrows; and this, owing to the high value of his land, he can do with ease. Looking to the Province as a whole, however, we find that the harvests of the last ten years have been above the average. There have been no years of famine as in the nineties, and only two bad years, while four were definitely good, and one, as we have seen, was a record year. The remaining three were normal or slightly below normal. Accordingly, though a few individual districts may have suffered, we can hardly attribute the increase in debt throughout the Province to the seasons.

Increase of Population

Of the many causes of poverty which operate in a country like India increase of population is the most serious, because where agriculture is stagnant mouths increase faster than food; and when agriculture is the only important industry few leave the village where they were born. The common attitude therefore which sees in an increase of population a sign of well-being is fundamentally wrong. It can only be an advantage if production, agricultural or industrial, outstrips it; and even then, so far as industrial production is concerned, it is a doubtful blessing, as it leads inevitably to overcrowded towns at

home, and a struggle for markets abroad, and the latter as often as not ends in war. It was not therefore necessarily matter for regret that the last census disclosed a substantial decline in the population of the Punjab. The fact was of course deplored. Attention was concentrated upon the ravages of malaria and plague, and the economic advantage of a smaller population for the land to sustain was not considered. In the nineties both population and indebtedness rose considerably. I have little doubt that the one affected the other; and in view of the great increase in debt during the last five years, I would hazard the guess that the population is no longer declining¹ but almost certainly increasing. At the same time the fact that throughout the period of the last census indebtedness was slowly but surely increasing shows that there are other causes at work.

Splitting up of Holdings

In a country where the laws of inheritance prescribe equal division of property between sons, an inevitable result of an increase of population is the splitting up of holdings, and when these are small this is likely to be a potent cause of debt. In 1896 an exhaustive enquiry into indebtedness in four different areas was undertaken by Mr. Thorburn, Commissioner of Rawal Pindi. In his illuminating report, which deserves to be republished, he says that the four most prominent causes of debt are fluctuations in yields, losses in cattle, the obligation to pay land revenue whatever the harvest, and the splitting up of holdings from the growth of population. The first two causes are really aspects of seasonal vicissitudes which have already been considered; and if one may judge by the

¹ Since this was written the mortality figures of the influenza epidemic of the autumn of 1918 have been published, showing a death rate of 5 per cent of the population. This would probably falsify the guess made above.

Assessment Reports of the last ten years, land revenue is no longer a serious cause of debt. There remains the splitting up of holdings. Official statistics show that there are now 136,000 more owners and shareholders and 58,000 more holdings than five years ago. The increase in the case of the former is about 4 per cent. Each of the nine districts which we are specially considering shows a similar tendency; and in five, Lahore, Gurdaspur, Hoshiarpur, Jullundur, and Lyallpur, the provincial average is exceeded. In spite of a great expansion of cultivation, the effects of which will be discussed presently, the increase in shareholders has naturally led to a reduction in holdings. This has occurred in each of the nine districts in question. In the six in which the average holding is less than 7 acres the reduction varies from half to a quarter of an acre. For the Province as a whole the average has fallen from 8 to $7\frac{1}{2}$ acres. In itself this is perhaps not a change of much importance; but viewed as a continuing process it is one that may deeply affect the future welfare of the Punjab. Meanwhile there can be little doubt in at least seven out of the nine districts (in Lyallpur and in part of Ferozepore the average holding is still large enough to bear reduction) the splitting up of holdings has been a cause of the increase of debt. The fact that the number of owners and the amount of debt have both increased more rapidly in most of these districts than in others, is at least presumptive evidence of this. In Jullundur, indeed, where there are nearly 10,000 more owners and shareholders than five years ago, and where the cultivated area has shrunk by 13,000 acres, it has probably been the determining factor, and perhaps explains why the increase in debt should have leapt up from less than two lakhs in the first half of the last decade to 26 lakhs in the last five years.

Expansion of Cultivation

Jullundur is one of the very few districts in which the cultivated area has declined. For the whole Punjab the last five years show an increase of over a million acres or $3\frac{3}{4}$ per cent. Much the greater part of this is due to the extension of canal irrigation. For canal cultivation more capital is needed than for dry. It is reasonable therefore to suppose that borrowing has taken place on this account. The effect of this upon an increase of debt may however be exaggerated. Thus none of the five¹ districts in which the expansion of cultivation exceeds 10 per cent shows a remarkable increase of debt. Two of these, Mianwali and Dera Ghazi Khan, both Indus Districts, while together adding 200,000 acres to their cultivated area, have not added more than 20 lakhs to their debt, which works out to Rs.10 per acre. Moreover, in none of the districts in which debt has risen most has the expansion exceeded 4 per cent. In three of them the addition to cultivation is insignificant; and in one, Jullundur, there has been, as we have seen, a decrease. It would, therefore, be unwise to attach much importance to this factor. So far, however, as debt is due to an expansion of cultivation, it need not be regretted as it is productive debt.

Purchase of Land on Credit

There is nothing dearer to the peasant proprietor than land. It is the alpha and omega of his life, and his only means of sustaining it. In a striking passage Mill says "When the habits of a people are such that their increase is never checked but by the impossibility of obtaining a bare support, and when

¹ Montgomery (39 p.c.) Multan (15 p.c.) Gujranwala (13 p.c.) Mianwali (12 p.c.) D. Ghazi-Khan (10½ p.c.)

this support can only be obtained from land, all stipulations and agreements respecting the amount of rent are nominal. The competition for land makes the tenants undertake to pay more than it is possible they should pay." *Mutatis mutandis* this applies as much to the price of land as to its rent, and is one explanation why in the Punjab its price has more than doubled during the last 20 years. In the East the primary value of land is social rather than commercial. It is one of the three things for which money is always forthcoming. The other two of course are a marriage and a case in the courts. All three are a common source of debt. We must however distinguish between the man who borrows to buy land which will yield enough to pay back both principal and interest and the man who borrows to buy it at an inflated price. The former is thoroughly business-like, but the latter is very much the reverse. Now that the price of land is abnormally high borrowing to buy must in nine cases out of ten be thoroughly unprofitable. The purchase of land may, therefore, be an important cause of debt. On the other hand, as land is generally sold by one cultivator to another, it may be argued that the loss of the one being the other's gain the net result upon total indebtedness should not be much affected. This would be truer if loans were repaid as readily as they are taken. Thus when, as must often happen, land is sold to meet a debt, part of the price paid is probably retained for current expenses. If at the same time the purchaser has borrowed to buy, debt will increase more on the one side than it is reduced on the other. If this is correct we should expect to find the rise in indebtedness during the last five years accompanied by a rise in sales. This indeed is exactly what has happened. In the five years ending with 1912

land was sold for $7\frac{1}{2}$ crores, and in the last five years for 12 crores. There is therefore a rise of $4\frac{1}{2}$ crores, or an increase of 60 per cent. Turning to the figures for our nine districts we find the same feature. Lyallpur is the most striking case. In the earlier period land was sold for 48 lakhs and mortgage debt increased by only one lakh, whereas for the last five years the figures are respectively 95 lakhs for sales and 43 lakhs increase of debt. The two are undoubtedly connected, and in the Civil Justice Report of 1912 we read that "the acquisition of proprietary rights has left some of the Lyallpur zamindars short of ready money and they have sold or mortgaged their newly gained proprietary rights and decamped with the proceeds leaving debts behind them." In Ferozepore too a larger amount of land has been sold during the last ten years than in almost any district in the Province, and, as we have seen, there is no district in which indebtedness has increased more rapidly. On the other hand large amounts of land have been sold in Multan and Gujranwala which are not amongst our nine districts. Even in them, however, mortgage indebtedness has risen substantially during the last five years, the increase in each case being over 10 lakhs. It may therefore be concluded that land purchase and debt are connected, but the connexion is probably less marked in districts where money is plentiful.

High Prices

We come now to high prices. It is commonly assumed that they are good for the cultivator, as indeed they are if he has more to sell than to buy, but if it is the other way round, he benefits no more than any other class of consumer. In India a man with 20 or 30 acres will often have more to sell than to

buy, and if his land is secured against bad harvests by irrigation high prices are an obvious advantage. The canal colonies have felt this to the full as is shown by the large amounts of gold which they continually absorb. But in districts where the average cultivated holding is six acres or less it is only in years of good harvests that there is much surplus grain to sell, while in years of bad or unfavorable harvests, for part of the year at least, grain will probably be bought rather than sold. Let us compare for a moment two districts as dissimilar as Gurdaspur and Hissar, the one submontane with a good rain-fall, the other officially described as 'arid' with a rainfall of less than 15 inches. Going from the one to the other is like passing from a wilderness into a garden. At worst Gurdaspur will always have some appearance of cultivation. In Hissar, on the other hand, in a bad year it is possible to ride for 50 miles and hardly see a green thing. Yet the surprising thing is that in Hissar the people are undeniably better off than in Gurdaspur. They are better housed, better clothed and probably better fed. Even at the end of a year which had given only $3\frac{1}{2}$ inches of rain most people in Hissar had grain enough left in their bins to live on. Yet in November, 1918, in Gurdaspur owing to a bad autumn harvest following upon a spring harvest which, though poor, was by no means a total failure, more people than not were buying grain (rice and maize) at Rs.5 a maund. The last and most telling point in the comparison is that debt in Gurdaspur is much higher than in Hissar. Thus if we take the Sirsa Tahsil of the latter and compare it with the Shakargarh Tahsil of the former, both being areas that are almost entirely dependent upon their rainfall, we find from enquiries recently made that in the Sirsa Tahsil the indebtedness of proprietors is

about ten times the land revenue, while in the submontane tahsil of Shakargarh the multiple is as much as 25. Further, in the former, 26 per cent of the proprietors are free of all debt, and in the latter only 3 per cent. One explanation of the difference is over-population, which neutralizes all the advantages of nature. Hissar, with a cultivated area of $2\frac{3}{4}$ million acres, has to support a population of only 850,000, whereas to feed a slightly smaller population (837,000) Gurdaspur has only 833,000 acres. In Hissar the average cultivated holding is 22 acres against 6 in Gurdaspur. In the former therefore a good year will produce a large surplus of grain which can either be stored against a bad year or be sold to great advantage. In Gurdaspur this is generally impossible. It is not surprising therefore that it is one of the most heavily indebted districts in the Punjab, and it is significant that the only district which is more heavily mortgaged is the adjoining district of Sialkot where conditions are similar. High prices combined with poor harvests have accentuated the evils of over-population. And in this connection it has to be remembered that while the cultivator sells in a cheap market, as a retail purchaser he buys in a dear one. Accordingly as a consumer he feels the full effect of a rise in price, but as a producer he cannot gain its full advantage unless sale is co-operatively organised. This may explain why the last three years, which have all been years of war and abnormal prices, have seen so startling an increase of debt.

Facile Credit

A recent American writer on rural economics says that "farmers who do not keep accurate accounts and who have not a keen sense of values should avoid the use of credit as they would the plague". This

is a counsel of perfection. All the world over the small proprietor, provident or improvident, must borrow. It is important therefore that his credit should be both cheap and good. So far as it is only cheap it is a danger. It is the primary object of co-operative credit to secure that when credit is cheap it shall also be good and when good that it shall also be cheap. Where however the cultivator is left to himself, his credit will more often be cheap than good. The high value of his land makes borrowing a matter of ease, and the more valuable it becomes the more he is tempted to borrow. It was this that made an official of the Central Provinces write in 1889—"the owners of the land grow poorer, while their land is daily rising in value." Pope expresses the same idea when he says:—

"The devil's grown wiser than before ;

He tempts by making rich, not making poor."

In the Punjab Mr. Thorburn, to whose report we have already alluded, traces the beginnings of serious indebtedness to the seventies, when it became an easy matter to alienate land. Since then its value has steadily increased, notably in the last ten years, during which the price of cultivated land has risen from Rs.75 an acre to Rs.186, a rise of 148 per cent. In the same period debt has also increased enormously, and the theory may be hazarded that in a country of uneducated small proprietors, unless credit is controlled, debt will always rise in close ratio to land value, that in fact debt follows credit. In Sir Frederick Nicholson's well known report on Co-operation we read that even in so thrifty and educated a country as Switzerland an abnormal rise in land values led to the peasant proprietors becoming much more indebted, which shows, as Sir Frederick says, that "even in countries of good education the peasant proprietor cannot refrain from

pledging any additional value which the land may acquire." The remark applies with double emphasis to India and its illiterate masses. To them a sudden rise in the value of land may be little short of a disaster. Yet official reports speak of it again and again as a matter for congratulation. Sir Bamfylde Fuller was nearer the mark when he wrote in 1889 that "money is practically never raised for the improvement of estates and in almost every case the cause of debt has been improvidence and ignorance, pure and simple. In such a case a fall in the value of land as a means of raising money is one of the best things that can happen." Applied to the Sikhs and Arains of the Punjab this is perhaps an over-statement. Over 14,000 wells, mostly masonry, have been sunk in the last five years. Several thousand improved implements have been sold, large tracts of waste land have been broken up, and there is evidence that in the more progressive districts the rudiments of improved agriculture are at last being grasped. But when all is said and done the money spent in this way probably represents but a very small part of the amount borrowed. While 14,000 wells have been sunk there has been an increase of 40,000 suits, many of which must have cost the litigant much more than the price of a new well. With a person so incurably litigious as the Punjabi it may be safely asserted that a substantial part of the money raised on the inflated value of land has been spent in the Law Courts. In the Civil Justice Report of 1913 the increase in the number and value of land suits in Gujranwala is definitely ascribed to the cupidity aroused by the rising value of land. The same report states that in Jullundur practically every alienation is challenged, and the local District Judge adds expressively "the Courts are the Monte Carlo of the peasant." That the con-

nexion between debt and litigation is close is shown by the fact that year after year more suits are instituted in Muzaffargarh, Gurdaspur and Sialkot, which are probably the three most heavily indebted districts in the Punjab, than in almost any other district in the Province. Hoshiarpur and Amritsar run them close, and both are more heavily mortgaged than most districts. There can be no doubt that debt often follows litigation, and in the Punjab it looks as if litigation followed credit, the one increasing as the other expands.

Another common source of debt is ceremonial expenditure, especially of course upon marriages. It is difficult to collect statistics to prove this, but most cultivators will tell you that marriage costs more than it did. Twenty years ago a peasant proprietor could get married for Rs.100. Now Rs.400 or Rs.500 will hardly cover it, while amongst the Sikhs of the central districts, where the rise in indebtedness has been most marked, it will cost from Rs.1,000 to Rs.2,000. I know of a Ziladar who, though Rs.6,000 in debt, spent Rs.5,000 on a daughter's wedding. And last cold weather I came across a member of a co-operative society who in 1916 spent Rs.1,300 in marrying a son and the following year Rs.400 in marrying a daughter. Together the two sums represented 17 years rental of his 10 acre holding. And at the time he already owed over Rs.1,500, most of which he had borrowed for a case. Instances of this kind are probably not uncommon, and they have doubtless multiplied since women became fewer than men. In short, borrowing for unproductive purposes is far too common in India.

We have now examined each of the seven causes to which the increase in indebtedness in the Punjab may be due. Superficial as the survey has been certain tentative conclusions emerge. In the first place two factors stand out prominently, the great expansion

of credit and the rise in prices. The former has probably operated throughout the Province, the latter wherever holdings are small. Secondly, with these two main causes are interwoven others the precise importance of which it is difficult to determine as they vary in effect from district to district. Lastly, it is clear that further enquiry is needed, and it should be detailed and systematic. Prosperity and debt are evidently intimately connected; and some of the accepted views in regard to the former would appear to need revision. If this is so, important consequences follow. One is that credit must be controlled. With a simple, uneducated and naturally improvident peasantry it is clearly dangerous to let people borrow as they please. As a servant credit can turn sand into gold, but as a master it will turn gold into sand. Restriction therefore is necessary, and co-operative credit is the obvious way of applying it, for members of a co-operative society cannot borrow at will. Moreover, through their society they learn the all important lessons of punctual repayment, honest dealing and thrift. Co-operation is indeed the very negation of indebtedness. In the Jullundur district I calculate that ten years of co-operation have reduced the net indebtedness of 20,000 members by 25 lakhs. No effort therefore and no expense should be spared to extend co-operative credit to every village that can be induced to accept it. Incidentally too co-operation is the best remedy for high prices.

Underlying the whole question of indebtedness in the Punjab is the problem of small holdings. We have seen that they are getting smaller and that this process is likely to continue, that they cannot resist bad seasons and suffer from high prices, and that in stimulating a demand for land they lead to its purchase on credit at an inflated value. The evil is clear but the remedy is difficult. The laws of in-

heritance can hardly be changed, nor is the Punjab well adapted to industries which would provide a subsidiary means of subsistence. The latter indeed need not be regretted, for no one who is acquainted with industrial conditions in India could wish the relatively healthy life of the country to be exchanged for the demoralizing influences of the town. There remain only two remedies. One is the improvement of agriculture so that production may keep pace with population, and the other is the encouragement of emigration. A good start with the former has been made by the Agricultural Department, but India is still far behind America and Western Europe in the effort made. Moreover there are limits to what can be done, as small holdings and advanced agriculture do not agree very well together; and in India the difficulty is accentuated by the climate which saps all desire for improvement. The alternative remedy, emigration, is therefore important. Before the war the Punjabi was more and more going to America and the Far East, and though he often returned a wealthy man—some have brought back nearly a lakh—he was not always a better man for the change. The war has happily provided an ideal colony for the future. In Mesopotamia, with its somewhat better climate than the Punjab, the sturdy qualities of our peasant proprietors should reach their fullest development. It is to be hoped, therefore, that this will not be lost sight of in the reconstruction that will follow peace with Turkey. The rural Punjab deserves well of its rulers; and as the only martial province in India, anything that threatens its welfare is of more than usual importance. At present it is undoubtedly prosperous, but prosperity has brought debt. This anomaly should if possible be removed.

A STUDY OF THE INDIAN FOOD PROBLEM

(CONCLUSION FROM LAST NUMBER)

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The Average Supply

In the previous portion of this paper the total requirements of grains in British India for food, cattle and seed were ascertained; and the total available supply after correcting the figures of gross out-turn by allowances for wastage, and for imports and exports, was calculated. To bring the figures of total supply (see p. 110 above) in conformity with actual fact, however, or in other words to find the quantity actually available for consumption and other purposes, it is necessary to make an allowance for the amount carried over to the next year when the harvest turns out good in a particular year. I think if we assume that two-thirds of the excess over the average supply is carried over to the next year it will serve our purpose. To determine the average supply the total supplies of all seven years are added together and the sum divided by seven. The result gives the average supply of the middle

year (1914-15). It amounts to 55.22 million tons. If the quantity is annually increased by 0.5 per cent (the rate of the natural growth of population in British India during the period 1901—1911) for the last three years, and decreased by the same rate for the first three years, the results give the average supply for each year. The average supply thus calculated stands as follows :—

			<i>Millions of tons</i>
1911—12	...	...	54.41
1912—13	...	...	54.68
1913—14	...	...	54.95
1914—15	...	...	55.22
1915—16	...	...	55.50
1916—17	...	...	55.78
1917—18	...	...	56.06

On comparing the above figures with those of the total supply, it will be seen that the total supply falls short of the average supply in the following years to the following extent:—

	<i>Millions of tons</i>	<i>Percentage</i>
1912—13	2.52	4.6
1913—14	6.49	11.8
1914—15	1.18	2.1

And the total supply exceeds the average supply in the following years as follows:—

			<i>Millions of tons</i>
1911—12	...	...	1.18
1915—16	...	...	2.46
1916—17	...	...	4.74
1917—18	...	...	1.74

Quantity of food-grains actually available for use

If we carry over the two-thirds of the excess of food-grains over the average supply of each of the

above four years to their respective next years we get the quantity actually available for consumption and other purposes. In the case of the remaining years, the total supply of each of these years represents the quantity available for use. The quantity thus calculated stands as follows :—

			<i>Millions of tons</i>
1911—12	...	...	54.80
1912—13	...	...	52.95
1913—14	...	...	48.46
1914—15	...	...	54.04
1915—16	...	...	56.32
1916—17	...	...	57.90
1917—18	...	...	58.06

The Deficit

The figures for the total requirements of food-grains and the final total supply available for consumption and other purposes are placed side by side, and the reader will be surprised to find that there is a big deficit every year as given in column 4 below :—

In millions of tons

Year	Total Requirements	Final total supply available for use	Deficit
1	2	3	4
1911—12	64.33	54.80	9.53
1912—13	63.60	52.95	10.65
1913—14	63.03	48.46	14.57
1914—15	65.16	54.04	11.12
1915—16	65.83	56.32	9.51
1916—17	66.19	57.90	8.29
1917—18	66.40	58.06	8.34

Quantity of Food-grains consumed by Well-fed Classes

It will greatly help us in correctly understanding the consequences of this deficit if we determine the quantity of food-grains consumed by those classes of the people who are always well fed, *i.e.*, by those who, for one reason or another, are always in a position to get the quantity sufficient to maintain them in health and strength. In the absence of any definite information regarding the number of such people, only a rough estimate of their number can, at present, be made. Broadly speaking the population of British India falls under two main classes—

- (a) Agricultural,
- (b) Non-agricultural.

In the agricultural classes, I think, all the malguzars and proprietors of land who primarily live on the income from the rent of agricultural land, and the rich cultivators of the canal irrigated areas of the Punjab and U.P. are well above the starvation level, and they may be taken to be always well fed. Amongst the non-agricultural classes, I think, those whose family annual income is above Rs. 500 will ordinarily fall in the well-fed class. Now let us estimate the number of such people. From the Census Report of 1911 it will be seen that the number of those people and their dependents who were living on income from rents of agricultural land was 5,467,000. The Canal Colonies reports, and the Annual Reports on Irrigation in India, unfortunately do not give the number of people living in all the Canal Colonies of the Punjab, and so in the absence of any definite information, it will be better to assume that 75 per cent of the ordinary cultivators and their dependents living in the canal irrigated areas are above the starvation level. From a map showing the canal irrigated

areas of the Punjab it is easy to know the portions of the districts which are thus irrigated, and from the Census Report of the Punjab the number of ordinary cultivators and their dependents living in these parts can be approximately found. The number of ordinary cultivators and their dependents in these areas of the Punjab in 1911 was 3,151,000, and so the number of those cultivators who may be taken as always well-fed comes to 2.36 million. The number of such people in the canal irrigated areas of the United Provinces may be taken to be 0.5 million.

Now we turn to find the number of well-fed people in the non-agricultural classes. The income tax statistics as given in the *Statistics of British India*, Volume II, clearly show the number of those people whose family annual income is above Rs.1,000. In 1911 the number of such assesseees was only 289,826. But we have also to find the number of those people of non-agricultural classes whose annual family income is between Rs.500 and Rs.1,000. Before 1903-04 the income tax was also levied on all those persons of non-agricultural classes, whose family income was more than Rs.500 per annum, and so we know the number of assesseees whose income was between Rs.500 and Rs.1,000 in 1902-03.¹ It was 324,044. If we assume that the increase in the number of families with an income between Rs.500 and Rs.1,000 during the period 1902-03 to 1911-12 was exactly in the same proportion as in the case of those in the next higher class, i.e., of those with an income between Rs.1,000 and Rs.1,250, during the same period, a calculation gives the number of families with an annual income between Rs.500 and Rs.1,000 in 1911-12 as 550,200. Undoubtedly the rate of increase in the case of families

¹ See *Statistics of British India for 1911-12 and Preceding Years* (Sixth Issue); Part IV (b)—Finance and Revenue, p. 161. (Government Press, Calcutta).

with an income between Rs. 500 and Rs. 1,000 would have been somewhat greater, and it is just possible that many families may have escaped assessment in 1902-03, but for our rough estimation the above number will serve our purpose well. So the number of non-agricultural families with an annual income above Rs. 500 in 1911 was 840,026. As the average population per house according to the census of 1911 was 4.9, the total number of non-agricultural people whose family income was more than Rs. 500 was $(840,026 \times 4.9)$ 4.12 million.

We find, therefore, that the total number of those people who may be taken to have been always well fed in 1911-12 was as follows:—

<i>Agricultural :—</i>	<i>Millions</i>
(i) Those who live on rent from agricultural land	5.47
(ii) Rich cultivators and their dependents in the canal irrigated areas of the Punjab	2.86
(iii) Rich cultivators and their dependents in the canal irrigated areas of U. P.	0.50
<i>Non-agricultural :—</i>	
(iv) Number of people whose family annual income was above Rs. 500	4.12
Total ...	<hr/> 12.45 <hr/>

As the total population in British India in 1911-12 was 244.3 million it will be seen that only a little more than 5 per cent of the people can be included in the well-fed classes in 1911, and therefore for the period under inquiry I assume that 5 per cent of the people were always well-fed, and so the quantity of food-grains consumed by them works out as follows:—

<i>Millions of tons</i>			
1911—12	...	...	2.42
1912—13	...	...	2.43
1913—14	...	...	2.45
1914—15	...	...	2.46
1915—16	..	...	2.47
1916—17	...	...	2.48
1917—18	...	...	2.50

But in the above calculation we have not taken into consideration one important fact that the children of every class are generally well fed. People will themselves starve, but will not allow their children to starve as far as they can; and therefore, if we assume that 80 per cent of the children between the ages 1 to 15 of the classes not included above, are generally well fed, the quantity of food grains consumed by them will stand as follows:—

<i>Millions of tons</i>			
1911—12	...	...	8.02
1912—13	...	...	8.06
1913—14	...	...	8.10
1914—15	...	...	8.14
1915—16	...	...	8.18
1916—17	...	...	8.22
1917—18	...	...	8.26

Adding the above quantity consumed by 80 per cent of the children to the quantity consumed by the well fed rich classes we find the total quantity of food-grains consumed by all well fed people, and it is as follows:—

<i>Millions of tons</i>			
1911—12	...	..	10.44
1912—13	...	...	10.49
1913—14	...	...	10.55
1914—15	...	...	10.60
1915—16	...	...	10.65
1916—17	...	...	10.70
1917—18	...	...	10.76

*Percentage of the total Requirement of Food-grains
left for the remaining population*

We have seen that 12.45 million people are ordinarily well fed in British India; and of the total number of 82.4 million children (between 1 and 15) of the remaining population, 80 per cent, *i. e.*, 65.89 million are also well-fed; and as the number of children of ages between 0 and 1 is 8 millions, so the total number of people who might be taken to be always well fed in British India in 1911-12 was 86.84 million, and therefore the remaining population of British India, *i. e.*, 156.96 million, or 64.6 per cent of the whole population, is likely to be directly affected by the deficit. Now let us see what percentage of their requirement of food-grains

In Millions of tons

Year	Number of people directly affected by the deficit.	Requirement of the people in column 2	The deficit	Quantity of food-grains actually available.	Percentage of the quantity available to the minimum quantity required.
1	2	3	4	5	6
1911—12	156.96	88.02	9.58	28.42	75
1912—13	157.74	88.21	10.65	27.56	72
1913—14	158.38	88.39	14.57	23.82	62
1914—15	159.32	88.58	11.12	27.46	71
1915—16	160.11	88.78	9.57	29.27	75
1916—17	160.91	88.98	8.29	30.69	79
1917—18	161.71	39.17	8.84	30.83	79
		Average	10.3		78

was available to them during different years of the period. If we subtract the total quantity of food-grains consumed by the well-fed classes from the total requirements for human consumption, we get the quantity of food-grains required by the remaining people,

assuming them to get sufficient to maintain them in health and strength. If we further subtract the previously ascertained deficit from these requirements we get the quantity actually available for their consumption. From the figures of the quantity actually available for their consumption, the percentage of the quantity available to the quantity required can easily be calculated. It is worked out in the table printed on the foregoing page.

Remarks on various possible Bases of Calculation

Before I conclude, a few words may be said about the various methods of calculation that have been employed in the above study. I am very much obliged to Lieut.-Colonel G. I. Davys, of the Military Food Laboratory, Kasauli, and Mrs. Davys, for giving me various suggestions in this connection. I am fully conscious of the fact that in the calculation of the requirement of food-grains for human consumption I have assumed that all food-grains are of equal food value which in fact is not correct.

The average requirements of food-grains to keep a man in health and strength can also be calculated in the following other two ways: (i) by finding out the daily requirements of protein, fats, carbohydrates, and salts; (ii) by estimating the calories required by the average man per day, and then finding out the caloric value of the food-grains that are available for human consumption.

Both these methods are open to one objection or the other. It is just possible that a certain food-grain, say a millet, may have great caloric value but may have little nourishing or sustaining power, while a substance rich in protein, fats or other salts may have comparatively less caloric value; and so these methods if employed separately will give results which

are not likely to agree. Lieut.-Colonel Davys has suggested to me to use the caloric method as a control for the comparison of results. I could not, unfortunately, get the figures of the caloric value of more than three or four Indian food-grains; and so I could not accurately calculate the requirements of food-grains for human consumption by this scientific method. At first sight it appeared that the jail diet was in excess of requirements, but from my existing information on the subject I find that there appears to be a close agreement in the final results obtained by the two methods; and I hope to establish the point much more clearly when I get full information.

It has been suggested to me that the poor people get a greater quantity of vegetables than is given to prisoners in jails; and that rich people take a greater quantity of sugar, oil, and *ghi* as substitutes, and so some reduction ought to have been made in their requirements of food-grains. Now we know that the jails of the Central Provinces allow 3 *chhataks* of vegetables per head per day, and in the United Provinces jails only one *chhatak* is allowed. In my opinion, an allowance of 3 *chhataks* per day, even in the case of poor people, will represent quite a fair standard; and if poor people take more than 3 *chhataks* a day, I consider it to be the direct result of the deficit of food-grains, because I think these poor people are compelled to depend upon a greater quantity of vegetables, through not being in a position to get the necessary amount of food-grains.

In the case of rich people I have taken the question of substitutes into consideration in the determination of the probable degree of error. It may, however, be noted that the question of substitutes cannot influence our final results to any appreciable degree, firstly because the number of rich people is estimated

to be only about 5 per cent of the whole population, and secondly because the substitutes would not reduce their requirements of food-grains to any great extent. This will be apparent from a comparison of the standard adopted for the inquiry with the daily ration for Indian troops (combatants) and Indian followers of the Indian Army, the information about which I obtained through Prof. Jevons, after the first portion of this article was already in the press. The diet scale of Indian soldiers may well be considered as an ideal ration for full efficiency and may be assumed to represent the requirements of well fed classes, while the Indian followers may be assumed to live on a little more than a subsistence diet. The rations for Indian troops (combatant) and followers are as follows:—

	<i>For Indian Troops</i> ¹	<i>For Indian Followers</i> ²
	<i>ozs.</i>	<i>ozs.</i>
<i>Atta or Rice</i>	24	24
<i>Dal</i>	3	4
<i>Ghi</i>	2	1
<i>Gur</i>	2	...
Potatoes	2	...
Salt	$\frac{1}{2}$	$\frac{3}{4}$
Fire wood	48	...

and the substitutes allowed are as follows³. —

<i>Article short issued</i>		<i>Substitute</i>
	<i>ozs.</i>	<i>ozs.</i>
<i>Ghi</i>	1	<div> Dressed meat (mutton or goat) or Cooking oil </div> 4 2
<i>Gur</i>	1		Sugar 1

From the above we see that in the Indian Army an Indian soldier is given 27 ounces of food-grains,

¹ Army Tables, Miscellaneous Services, Part I., Table 15, as reconstructed by July Appendix to I.A.O.—1918.

² Army Tables, Miscellaneous Services, Part I., Table 16 Note 2.

³ Army Instruction (India) No. 407, dated 30-4-1918.

and an Indian follower is given 28 ounces of food-grains, and this compares very closely with the standard of 28 ounces adopted for the inquiry.

Lieut.-Colonel Davys thinks that the reduction of the food-grain allowance by $6\frac{1}{4}$ per cent for meat eggs and fish is too high, and he suggests a reduction of 5 per cent only. I have taken this point into consideration in the investigation of the probable degree of error. He further thinks that the wastage is put very high. As has been already noted, there are various items which can be included under the term wastage; and it is practically impossible to calculate the exact amount of wastage in the case of each one of them. In a Resolution dealing with the measures to be adopted for the extirpation of bubonic plague, issued by the Government of India, and published in the Gazette of India dated 21st August 1920, it is estimated that in British India alone the number of black rats is 375 millions, and that the quantity of grain devoured by them in the course of a year amounts to about one million tons. It will be seen that this estimated wastage by black rats alone amounts to nearly 1.5 per cent of the annual average production of all the food-grains in India.

I have seriously thought over the whole question of wastage once again, and I feel that there is no over-estimation in my assumption of 10 per cent as the wastage from all causes. Notwithstanding this, in the investigation in the next section of the probable tendencies to error, I have, however, made allowance for a probable slight over-estimation of the wastage.

Consideration of the Probable Tendency of the errors in our Calculations

Now we turn to the problem of considering briefly the extent of the probable amount of error in our

calculations. It may, however, be noted that the errors are of such a nature that they cannot even be estimated with any approach to accuracy, so we can only show in what way they tend to influence our final result. They may be treated under the following two heads:—

- (i) those which affect the estimate of the yearly deficit of food-grains.
- (ii) those which affect the percentage of the quantity available to the calculated quantity required by the residuum (64.6 per cent) of the population.

These are shown separately in Appendices I and II. From Appendix I, it will be seen that in the calculation of the deficit there are ten sources of error, and the majority of them tend to make the calculated deficit more than the actual one. All these errors, however, should not be given equal importance; and I feel that the resulting error cannot be more than two or three per cent; and so it will be quite apparent that the big deficit shown every year is not at all fictitious, and it is fairly correct even from the statistical point of view.

This very slight overestimation of the deficit tends to make the calculated percentage of the quantity available to the quantity required a little less than the actual one; but from Appendix II it will be seen that there is one more source of error which tends to make that percentage less, while two other sources of error are tending to make that percentage more than the actual one. I think, therefore, the effects of the slight overestimation of the deficit are greatly modified. Therefore, I think that the percentage of the quantity available to the quantity required by the residuum (64.6 per cent) of the population as calculated above may be taken to be fairly correct.

Conclusion

From the above study we are forced to the conclusion that even in the best year from an agricultural point of view (*i.e.*, 1916-17), and even with restricted exports of food-grains to foreign countries due to the war, so many as 160 millions of people in that year were in a position to get only 79 per cent of the coarsest kind of food-grains to maintain them in health and strength; and in a famine year (1913-14) the percentage fell to such a low figure as 62. Taking an average of all the seven years, it will be seen that 64.6 per cent of the population lives always on insufficient food, getting only about 73 per cent of the minimum requirement for maintaining efficiency. In other words, it clearly shows that two-thirds of the population always get only three-fourths of the amount of food-grains they should have.

It is just possible that one-third of the above number (two-thirds of the population) may be getting a little less than 90 per cent of their requirements; and the rest of the two thirds, or 100 million, inspite of hard labor, may be getting for a greater part of the year less than 60 per cent of food-grains that are given to the worst sort of criminals in the jails of the United Provinces and Central Provinces. This clearly shows the gravity of the situation in which we find ourselves. The country cannot make progress in any way while such a state of affairs continues.

The above conclusions are in full accord with the experience of those who have carefully observed the conditions of living of the Indian masses in their own villages; and they unmistakably show, as nothing else can, the urgent necessity of taking in hand immediately and in right earnest the problem of agricultural improvements along right lines, to help the Indian cultivator to raise two blades of corn where one grows now.

APPENDIX I

Finding out the Error in the Calculation of the Deficit

An error is called *positive* if it tends to make the calculated deficit less than the actual one.

An error is called *negative* if it tends to make the calculated deficit more than the actual one.

Error due to:—

*Whether
positive or
negative*

- | | |
|---|---|
| 1. Quantity of food-grains required by sick persons being less than that given in the Standard adopted for the inquiry. | — |
| 2. Quantity required of inferior kinds of food-grains consumed by poor people being more than that given in the Standard adopted for the inquiry. | + |
| 3. Assuming that one half of the population takes as much meat or fish as to reduce their requirement of food-grains by one-eighth during one year. (Lient.-Colonel Davys suggests the reduction of 5 per cent for the whole population). | + |
| 4. Area reported for crops being less than the area for which population is reported. | — |
| 5. Taking the yield for the area for which yield figures are not available in the same proportion as these for which they are available. | + |
| 6. Taking 500 lbs as average yield per acre for 'other food-grains and pulses.' | — |
| 7. Probable very slight over-estimation of the wastage. | — |
| 8. Area reported under the crop being less than the actual one. | — |
| 9. Yield in bad years being very likely to be over-estimated. | + |
| 10. Yield in good years being very likely to be underestimated. | — |

APPENDIX II

Finding out the error in the final calculation of the percentage of the quantity of food-grains available to the quantity required by the residuum (64.6 per cent) of the population.

An error is called *positive* if it tends to make the calculated percentage less than the actual one.

An error is called *negative* if it tends to make the calculated percentage more than the actual one.

<i>Error due to: -</i>	<i>Whether positive or negative</i>
1. Probable slight over-estimation of the deficit (result of Appendix I)	+
2. Underestimation of the number of rich families earning between Rs. 500-1000 per annum (assuming all rich families consume full allowance.) ¹	-
3. Omitting the number of rich 'ordinary cultivations' of India from other parts of the country except the Punjab and the United Provinces. ¹	-
4. Not making proper allowance for vegetables, oil and <i>ghi</i> taken as substitutes by rich people, and the consequent reduction of their requirement of food-grains.	+

¹ The number of persons in the residuum will undoubtedly be less in the case of Nos. 2 and 3.

THE SUBSTITUTION OF SILVER FOR GOLD IN THE CURRENCY OF SOUTH INDIA

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The fact that a gold currency was formerly in use in South India has often been alleged as an argument in favor of the possibility of maintaining a gold currency in India to-day. However, those who have quoted this example have in reality had very few facts regarding it at their disposal. I believe it to be the case that the more closely this early gold currency is examined, the less evident will become its value as an argument for establishing a gold currency to-day. One will find it distinguished by the same characteristics in the 18th century as distinguished it before the War. Then, as now, it demanded a relatively large import in order to maintain a relatively small volume in circulation.

On the Coromandel Coast, the precious metals were, in the 18th century, obtained entirely, or almost entirely, by foreign trade. The principal share was derived from Europe in payment for the piece-goods which formed the staple export to the West. The remainder came from the various regions with which the coast was connected by the country trade. Both silver and gold came from Manilla, which obtained the first from America and the second from China. A certain

quantity of gold dust was brought from the islands of the Indian Archipelago. The European trade to China produced occasional exports of gold from Canton to Madras, Pondicherry, and Negapatam, when the price of tea and silk was too high to permit returns being made to Europe in those commodities. And finally silver, which had found its way overland from Europe, was imported from Jeddah and the Red Sea. But it is not possible, until the close of the century, to form any estimate of either the volume of these imports or the ratio of imported gold to silver.

One fact, however, stands out from this mass of uncertainty. Silver was tending to replace gold as the principal export from Europe to the Coast. In the 17th century gold had been the more regular and constant export from the West. Thus in 1647 dollars gave a loss of 7 per cent, while gold yielded a profit of $13\frac{1}{2}$ per cent¹. Ten years later we read that *reals* and all kinds of silver were in low esteem.² Another ten years and we are told that in Governor Langhorne's time dollars had exchanged at so low a rate as 20 for 10 pagodas.³ However in the last quarter of that century silver rose considerably in value. In 1681 dollars sold at $16\frac{1}{2}$, and in 1682 at $15\frac{5}{8}$ for 10 pagodas.⁴ And although heavy imports of dollars by the English temporarily reduced the rate, in 1690 rupees were quoted at a price which was equivalent to $12\frac{3}{4}$ dollars per 10 pagodas. This last value was not maintained for long; but in 1700 Lockyer reckoned the dollar at 15,⁵ and this rate continued approximately constant for the next forty years. Silver was imported steadily by the French and English; and

¹ Foster's *English Factories in India*, Vol. viii, p. 165.

² Love's *Vestiges of Old Madras*, Vol. 1, p. 194.

³ *Records of Fort St. George*—Despatches from England, 1681-86, pp. 78-79.

⁴ *Loc. cit.*

⁵ Lockyer, *The Trade to India*.

it is interesting to note that the former had to sell almost all their imports at Madras, as in those days that place was an important financial centre, where all the bankers of note kept representatives. I do not find that the French ever realised less than a rate of about $16\frac{1}{2}$, or more than $14\frac{1}{2}$. They certainly averaged 15 dollars per 10 pagodas.¹

This stability of rates was, however, illusive. Silver was really depreciating, but the fact was concealed by a progressive debasement of the pagoda. In the Carnatic about this time there are said to have been 22 mints under the Nawab. Besides these, the English had mints at Madras and St. David's; the French at Pondicherry; and the Dutch at Negapatam and Pulicat. In the 17th century these issued a great variety of coins, indeed in more than one case numismatists have been unable to determine what exactly constituted the coins the names of which have survived. But in spite of this, there is reason for supposing that all the pagodas circulating in the south of the peninsula differed but little amongst themselves. At all events, there were two principal types coined: the one for circulation in the Carnatic, and the other for use in the countries to the Northward, later known to us as the Northern Circars. For a century or so after our arrival on the Coromandel Coast, the standard of these coins seems to have been well-maintained; at all events we find no complaints of the variation of the standard. However, from about the year 1720, the Nawab's mints began to issue coins of a lower touch than had been customary. Their fineness had been $86\frac{1}{2}$ per cent. In 1722 this fell to 85; and in 1724 to $84\frac{1}{8}$ per cent. By 1731 it had been reduced to $83\frac{1}{2}$; in 1736 it had fallen to barely 80, and before 1740

¹ See the valuable volumes of the proceedings of the *Conseil Supérieur* of Pondicherry, published by the *Société de l'Histoire de l'Inde Française*.

to 77 and in some cases still lower. Roughly speaking, we may say that in the twenty years 1720-1739 the Carnatic pagoda was diminished in value by over 12 per cent.¹

This greatly inconvenienced the European nations established on the Coast. Their chief bullion import was silver, which was really falling in value, so that it realised no more of the debased pagodas than it had done of the standard pagodas of an earlier date, while the cloth which they wished to buy had risen in proportion to the fall in value of the circulating coin. Each nation therefore endeavored to prohibit the currency of these country pagodas within their limits, and attempted to maintain the standard by continuing to issue coins of the old fineness. But each found, very naturally, that their coinage simply disappeared as fast as it was issued. As the French Council wrote a little later, "On receiving gold, the Malabars (*i.e.* the Tamils) always carry it to the mint that will give them most pagodas. Many have been re-coined at Alamburai, Villupuram and Wandiwash; and both at Pondicherry and Madras, people collect old pagodas in order to re-coin them."²

We do not know the precise action taken by the Dutch, except that they prohibited for a time the currency of pagodas of less than a certain degree of fineness.³ But regarding the French we have more information. In 1737, on representations of the merchants that, unless the Pondicherry standard was lowered, they would be obliged to carry their gold elsewhere, the fineness of the Pondicherry or Crescent pagoda was substantially reduce.⁴ In the next year, when the standard of the country mints had fallen below 80

¹ Letter from the French Company to Pondicherry, dated August 21, 1739, with the answer *en apostille* of October 13, 1740. (Pondicherry Records, No 28).

² Pondicherry to Madras, May 25, 1738 (Pondicherry Records, No. 13)

³ Pondicherry to Karikal, September 13, 1740 (*ibid.*)

⁴ Conseil Supérieur, March 20, 1737 (vol. iii, p. 78).

per cent, all merchants were forbidden to receive or pay out pagodas worse than 80 $\frac{5}{8}$ per cent fine, and all pagodas below that were to be re-coined. At the same time a quantity of poor coin received in payment for silver was ordered to be reminted.¹ In 1739 the English plan was imitated, the standard was fixed at 80 per cent fine, but coins not worse than 77 $\frac{1}{2}$ per cent might circulate at 4 per cent discount.² However these regulations must have been very ineffective. In the two years previous, the French had coined only 170,000 pagodas, while these had been received at only the same rate as the debased country pagodas, and had immediately disappeared from circulation.³

Meanwhile the English had succeeded in establishing a standard coin. Their first effort was a failure, probably owing to their having tried, like the French and Dutch, to prevent the baser coins from passing from hand to hand. But the second attempt was better judged. The great shroffs, who were bankers rather than mere money-changers, supported the scheme. A coin, 80 per cent fine, was established as the standard, called the Star pagoda from the large five-pointed star stamped on its rounded side; but other species were to circulate at their bullion value. The only special mint-regulation seems to have been the suspension of the $\frac{1}{2}$ per cent charged as mintage-duty.⁴ The new coin at once rose to a premium over the country pagoda. As early as 1742 the English Council was able to report the complete success of the scheme. The Star pagoda was eagerly demanded even in so distant a cloth-weaving centre as Salem, and the Nawab was rumoured to be about to raise his coin to the same standard as that of the English.⁵ Two

¹ *Conseil Supérieur*, May 6, 1738 (vol. iii, p. 139).

² *Ibid.*, May 11, 1739 (vol. iii, p. 203).

³ *Ibid.*, August 26, 1739 (vol. iii, p. 288).

⁴ Despatch from Madras to the Company, February, 1742.

⁵ *Ibid.*, and Madras to the Company, February 15, 1745,

or three attempts were actually made to do so; but the Nawab's mints did not command great confidence and the efforts were not maintained. Meanwhile the Star pagoda established itself as the principal variety of pagoda in circulation. In 1746 we find it preferred to the Crescent pagoda;¹ and when Godeheu reached the Coast in 1754, he had to deplore the popularity of the English coin, even in the French settlement itself.²

However, with that perversity which seems especially attached to currency history, the appearance of the Star pagoda coincided with the first premonitory symptom of that conversion of the currency from gold to silver which is our principal subject. About 1740 there were three types of coin in use in the Carnatic and the Southern countries dependent on it. The best-known of these, and that in which all large wholesale transactions were conducted, was the pagoda, the history of which we have been tracing. These were often sealed up in bags of 1,000, which are said to have sometimes passed from merchant to merchant for years without being opened. Nevertheless this was not the common coin of the people. That was a small gold piece of heavily alloyed metal, called emphatically in the language of the country the *fanam*, i.e., money. These varied much from place to place. At Golconda they went 12 to the pagoda, at Porto Novo and in the extreme South 18, at Pulicat and Pondicherry 24, at Madras 36. Everywhere these formed the coin of retail transactions. When the merchants made advances to the weavers in pagodas, the latter made haste to exchange these inconveniently large coins—they may roughly be reckoned at 8s. sterling—for the *fanams* with which they bought

¹ Diary of Ananda Ranga Pillai, vol. iii, p. 224.

² *Mémoire sur le sieur Godeheu*, Piece no. 2.

their yarn and daily supplies of food.¹ Beside these, there was yet another coin in circulation. This was the rupee, which had only been introduced in the Carnatic when the Moghals established themselves there at the end of the 17th and the beginning of the 18th century. As we shall see, this was not in extensive use; but it must have been found in considerable numbers in the principal Muhammadan centres, such as Arcot, and, a little later, Trichinopoly. It was used, I conjecture, chiefly in the payment of the troops maintained by the Nawab. Part of the "country" revenues seem to have been received in it; thus in 1750 the revenues of Trichinopoly were reckoned partly in grain and partly in rupees; the revenue of the temple at Tirupati was paid partly in rupees and partly in pagodas; and, when the English rented out the revenues of Madura and Tinnivelly, a little later, the rent was calculated in lakhs of rupees. But in the middle of the 18th century the rupee certainly was not in general use, and there were many districts where it did not pass current.

However about this time both the French and English made attempts to establish it as the standard coin for their trade. Ever since the 17th century the English had minted a special coin called the Madras rupee, for export to Bengal. By 1740 the three European nations, English, French, and Dutch, had secured the privilege of coining the Arcot rupee; and had actually produced this specie in considerable quantities. But this was less for local use than with the object of avoiding the delays and disputes incident to using the Nawab's mints in Bengal, to which province all alike sent great quantities of silver. Thus it was natural that when they were involved in

¹ They seem frequently to have received their advances in fanams, *e.g.* at Salem (Fort St. David to Madras, October 26, 1741).

difficulties by the debasement of the gold circulation, they should try to avoid their difficulties by substituting the silver coin.

Accordingly in 1739 the French Council resolved that rupees should be current at the rate of 320 per 100 pagodas.¹ But this at once involved them in worse difficulties than ever. The market-rate on the Coast was at this time seldom under 350; and while the measure must have been very acceptable to all debtors, creditors were exceedingly averse to it. Besides, the cloth-merchants were never willing to accept advances for cloth in any money but pagodas; so the Company's business was impeded. When these obstacles were reported in France, the Company recommended that silver should be sent to China, to be exchanged for gold;² but the Pondicherry Government never seems to have had enough funds at its disposal to do so on any effective scale. Ten years later Dupleix was still reporting the great difficulty of getting the merchants to accept rupees—at Karikal they were demanding 370 or 380 per 100 pagodas³ and desiring an annual supply of at least 200,000 pagodas a year in gold, which he does not seem to have obtained.⁴

In spite of all difficulties, the English had been able to maintain their gold payments till a much later date. In 1744 there had been a heavy drain of gold to Bengal, where the Maratha raids had set a premium on the more precious and easily concealed metal.⁵ But it was not until the War of the Austrian Succession and the capture of Madras in 1746, that their supplies of gold began to fail. After the

¹ Conseil Supérieur, July, 15, 1739 (vol. iii, p. 224).

² French Company to Pondicherry, November 25, 1741.

³ Pondicherry to the Company, September 20, 1750.

⁴ Dupleix to the Company, October 2, 1750.

⁵ Madras Consultations, July 9, 1744.

latter event the English at Fort St. David could hardly find enough gold to pay their garrison; and after the heavy expenditure in which they were involved by the siege of Pondicherry in 1748, they too succumbed to silver. In 1749 it was announced that rupees were to be current in the English settlement at 350 per 100 pagodas.¹ This was an undervaluation of gold, similar to that of the French in 1739. It was accentuated by the coming of Nasir Jang from the North in the following year, for his army was paid in rupees, so that this specie became commoner and cheaper than ever.² When it became evident that the maintenance of the rupee currency would involve a great rise in prices, it was determined to restore the pagoda.³ In December, 1750, the English Council wrote home for a supply of gold from China and resolved that all the receipts and payments of the Company's Treasury should be made in pagodas.⁴ However the receipts did not equal the outgoings, and in the following March, there was not enough gold in the Treasury to pay the troops, so that the Council was reduced to the expensive necessity of selling rupees for what they would fetch.⁵ After this luckily the situation eased down. Gold was imported, and rupees, which in 1750 had been as low as 400, had risen by 1756 to 364 per 100 pagodas.⁶

Thus the attempts of both French and English to establish the rupee in general circulation both failed. The chief reason probably was that their commerce was not extensive enough by itself to support a new standard of value, which was unpopular with the mass of the inhabitants, owing to its large fluctuations

¹ Fort St. David Consultations, April 25, 1749.

² Madras despatch to the Company, October 24, 1750.

³ Fort St. David Consultations, December 3, 1750.

⁴ *Ibid.*

⁵ Fort St. David Consultations, March 11, 1751.

⁶ Madras Mayor's Court Pleadings, 1767, f. 560.

both in pagodas and in fanams. But in spite of their failure, it is likely that the circulation of rupees increased appreciably about this time. I have already mentioned the flood of rupees which Nasir Jang's army let loose. But from this time until the fall of Pondicherry in 1761 the French and English kept large forces in the field, and, although soldiers' pay in garrison at this time was discharged in gold, their *batta*, or additional allowances in the field, was reckoned and paid in silver. A considerable quantity of rupees must therefore have been absorbed between 1750 and 1761 in exchange for provisions, forage, and cattle-hire.

These same years included another event which was to exercise a great influence on the currency position of the South. This was the establishment of the English as the predominant power in Bengal in 1757. It was as important financially as politically. From this event dates the reduction of the Company's bullion exports to India, and the commencement of the movement of gold and silver from Bengal to Madras. Till then the movement had been the other way. The commerce of Bengal with the Coast was conducted by sea. It consisted in the export from Bengal of silk, opium, sugar, and rice; and the returns had been made principally in the silver which came from Europe for the purchase of the Coast piece-goods. This was the circumstance which enabled South India to take large quantities of silver and yet refrain from using it as currency. But for this re-export of silver to Bengal, the value of silver on the Coast must have declined much more than it had actually done.

In consequence of the prolonged struggle with the French, the Company's finances at Madras became straitened, and the Nawab's debt rose high by the advances made on his account. These conditions were

exaggerated by the cessation of the Company's bullion exports, owing to the glowing accounts which Clive sent home of the great revenues of Bengal. In 1759 and again in 1760 the conduct of the campaign was dependent on the supplies of treasure received from Fort William. This was sent principally in silver, and was employed to meet the current expenses of the army, which in 1760 were reckoned at two lakhs of rupees a month. More silver was sent into circulation by coining the bullion which had been intended to provide the Company's investment in China.

The financial situation was similar in the next war—the First Mysore War. Financial help was again needed from the wealthy presidency of Bengal; but this time the assistance was afforded in gold. Clive's unfortunate scheme to establish a gold currency in Bengal had just failed, and the gold mohurs which he had coined were sent down to Madras to be re-issued as pagodas. In the years 1767 and 1768 7,80,000 pagodas were thus provided. The result well illustrates the sensitive nature of the Madras bullion market. In 1767 when there were no pagodas in the Treasury, the price of rupees was so low that the Council preferred borrowing pagodas at interest to issuing rupees at such unfavorable rates. But with the importation of gold from Bengal, the price dropped from 370 per 100 pagodas in 1768 to 320 in 1771; and even in the latter year silver continued very dear, in spite of considerable payments made to the Company by the Nawab in rupees.¹

In 1774-75 a certain amount of specie, principally gold, was exported to England on private account. This was due, not to the rapacious greed of individuals, but to the shortage of the normal forms of remittance

¹ Madras Public Consultations, October 5, 1767, f. 582; Jourdan to Dracot and Craufurd, March 26, 1768; Verelst, p. 96. Rupees had dropped to 345 by August, 1768.

to England. Ever since the time of the famous Governor Pitt, these remittances had usually been made in diamonds. But about the year 1770 the supply seems suddenly to have dried up. The Company too had cut down the amount of money that might be remitted through its Treasury at Madras. A third method, the export of merchandise to Canton, where the proceeds were paid into the Company's cash for bills on England, had been completely stopped. At this time we find the whole circulation of the Carnatic estimated at below 20 lakhs of pagodas. The Nawab, possibly basing his opinion on the authority of the sowcars, put it at 15 lakhs; while a member of the Madras Council suggested 17 lakhs. But even when we remember the restricted area within which the active circulation was confined, this seems much too low. At the close of the century it was reckoned at 80 lakhs, and there had probably been small change in the volume.¹

I have not hitherto found evidence in support of the commonly accepted view, that such exports were regular and considerable.² But there were certainly other ways by which the currency of the Carnatic was constantly exposed to loss. This was by way of the inland trade into Mysore, the dominions of the Nizam, and the Northern Circars. The last two of these is capable of clearer definition than is the case with most currency phenomena of the period which we are discussing. We have already seen that two kinds of pagodas were coined in the South,—at Madras these were the Star pagoda, which circulated in the Carnatic and the adjacent districts; and the Madras pagoda, which circulated in the

¹ Madras Public Consultations, January 16 and 19, 1775; Public despatch to the Company, January, 25, 1775; Military Country Correspondence, 1775, ff 25-26.

² Mr. Hamilton in his *Trade Relations between England and India* discusses this point.

Northern Circars and Hyderabad.¹ From 1767 onwards, with one trivial exception, none of the latter were coined on the Company's account, presumably because the cloth-investments in those regions were paid for out of the territorial revenues collected on the Company's account. Nevertheless these coins continued to be minted in surprising quantities for private merchants. For the ten years 1770-1779 the coinage of Madras pagodas averaged 2,24,000; in the ten years 1780-1789 it averaged 3,46,000. Altogether in these twenty years the total coinage of Madras pagodas by the English alone amounted to 60,71,000,² while that of Star pagodas was 90,80,000.³ The proportion was moreover higher even than these figures would suggest, for the Madras pagoda was worth 10 per cent more than the Star. If this is taken into account, it appears that of all the gold coined in these years at Madras, no less than 42 per cent was designed for export to the Circars and Hyderabad. Nor was there any return of coin or metal from those districts. While Madras imported from the Northward in considerable quantity cotton-cloth and grain, the first for re-export, the second for consumption, its returns in merchandise were small. The drain from Madras to Mysore, though not so distinguishable as that to the Northward, is well avouched by contemporaries.⁴ It probably was less considerable, perhaps a half. Altogether this internal drain at the lowest computation must be set at 4½ lakhs of Star Pagodas a year, of which five-sixths was gold. But besides

¹ In 1767 it was determined to attempt to circulate Star pagodas in the Northern Circars. The Masulipatam merchants then said that it depended on the bankers at Hyderabad. Madras Public Consultations, January, 27, 1767, f. 32. The experiment came to nothing.

² Identical coins were minted by the French and Dutch as well. The French coinage in the latter part of the century was inconsiderable; but the Dutch at this period were the largest importers of gold to the Carnatic.

³ See the figures in the appendix.

e.g., Petrie, who produced a valuable minute for the Committee of Reform, 1799.

this, deductions also have to be made for gold converted into ornaments. In 1799 this was estimated at a lakh of Star Pagodas a year. If we set it at a half of this, we have an annual average subtraction from the currency of the Carnatic of 5 lakhs of Star Pagodas, of which 4,50,000 was in gold.

This might very well continue so long as the normal imports sufficed to make the loss good. In the years we are considering, 1770-1790, this was certainly the case. The Carnatic obtained gold from two chief sources. The Dutch imported gold, derived from their Eastern trade, to the extent of 4 lakhs of pagodas a year.¹ Native merchants were believed to import about one lakh a year in gold dust from Achin and other places in the Archipelago. Portuguese vessels brought a small but uncertain quantity, perhaps half a lakh, from Macao. The imports thus sufficed to maintain the stock of gold in the Carnatic; but if anything should happen to interfere with them, evidently that stock would waste rapidly.

But although the stock of gold was being maintained for the moment, another change was going forward. Once gold had recovered from the effects of the import from Bengal in 1768-69, the price of silver remained pretty constantly in the neighborhood of 350 rupees per 100 pagodas until the year 1780. But then the outbreak of the Second Mysore War involved great expenditure. Considerable issues of rupees were made for current expenditure; and the price fell. In order to prevent any increase in the loss thus caused, at the close of the year, the Council gave orders that Arcot rupees should pass at 375 per 100 pagodas in payment of all sums under 300 pagodas. Within these limits rupees would be received at the Company's

¹ Petrie's minute *ut supra*. Cf. Milburn's *Oriental Commerce*, vol. i, p. 365.

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Treasury.¹ This regulation might perhaps have succeeded, had it not been accompanied by heavy imports of silver; but it was as usual necessary for Bengal to supply the financial needs of Madras. This was done in silver; and before the end of the war rupees were down to 400 per 100 pagodas.² After a time this was somewhat corrected by imports of gold from Bengal.³ By May 1790, 6 lakhs of pagodas had been imported, and the rupee had risen; but in the following year 31 lakhs of rupees arrived, and the rupee relapsed to 383.⁴ On this the Council resolved to fix the exchange at 365, and to receive rupees into the Treasury at that rate. This resolve was only taken after consulting the principal merchants and shroffs, who unanimously approved of the measure and promised their full concurrence and support.⁵

This was on the face of it an over-valuation of the rupee. Within the immediate region of its influence, that is, in Madras itself, it can only have caused a withdrawal of pagodas from circulation and the substitution of rupees in their place. This tendency must have been strengthened too by the outbreak of the war with France in 1793, and the subsequent extension of hostilities to the Dutch. For this latter cut off the principal source of regular gold supply. While the drain inland continued unaffected, silver passed in Madras at more than its local gold rate, and at the same time the normal import of gold was materially reduced. The consequence necessarily was that the stock of gold in Madras and its immediate neighborhood was rapidly reduced, and the circulating coin came to consist more and more largely of silver. This tendency

¹ Madras G.O.G., December 31, 1780.

² Military Consultations, September 20, 1786, letter from Bengal.

³ A statement of the imports of treasure from Bengal between 1785-86 and 1798-99 occurs in the proceedings of the Committee of Reform, 1799.

⁴ Public Consultation, March 1, 1791.

⁵ *Loc. cit.*

was temporarily checked by the heavy exports of bullion and specie which political events imposed upon Mysore in 1792 and 1799; but as two-thirds of this seems to have been sent almost at once to answer private mercantile obligations in Bengal and China,¹ the effects can only have been transitory. Nor was the balance made good by the Government import of treasure from Bengal. In the ten years 1790-99 that only averaged 1,60,000 pagodas a year in gold, while the silver similarly imported averaged $5\frac{1}{2}$ lakhs of rupees. Yet in spite of the shortage of gold and the considerable imports of silver, Government was able in 1797 further to enhance the value of the rupee by fixing the exchange at 350.² Some opposition was made to this; but as it was entirely ineffectual, I suppose that the money in circulation at Madras was principally silver. Indeed in the five years 1795-99 more than half the coin minted at Madras was in rupees; and in the five years which followed more than three-quarters of it was silver; while the gold that was issued must have disappeared from circulation as rapidly as it would to-day. In 1806 we are told that while gold constituted the nominal standard at Madras, silver formed the currency.³

However the extreme looseness of the financial organisation, coupled with the economic conservatism of the people, seems to have permitted what would to-day be impossible. Silver was certainly overvalued at Madras; but it was at the same time undervalued in the districts. For example we are told in 1796 that in the Baramahal the tahsildars insisted on the revenue collections being made in rupees, which they kept themselves, paying pagodas into the Treasury instead. They are said to have gained 7 per cent on such

¹ Petrie's minute *ut supra*.

² Public Consultations, October 6, 1797, f. 3312.

³ Report of the Committee of Finance, ap. Public Consultations, 1806, ff. 425, etc.

transactions. The bazaar rate of exchange at Salem must therefore have been about 340.¹ About the same time we learn that, although rupees had a considerable currency in the Masulipatam district, yet the revenue was paid almost wholly in Madras pagodas.² Evidently the latter coin was undervalued at the official rate of exchange and was worth more locally. Even so late as 1818, the Madras pagoda was overvalued in the Circars, although by then rupees formed the main part of the currency elsewhere.³

We may take it, I think, that the local value of silver varied considerably from place to place. It was low in the Coast towns, and the immediately surrounding districts, on the southern half of the Madras Coast, because these were in immediate touch with foreign traffic and directly received the bullion, mostly silver, in which the exports were paid for. It was low, though somewhat higher, in the weaving centres, from which the Coast exports were drawn, and where some fifty years of pressure had induced the weavers to accept their advances in silver rupees, instead of insisting, as formerly, on pagodas or gold fanams. It was rarer and dearer in the other inland districts of the Carnatic (with probable exceptions at Arcot and Trichinopoly) where it only filtered through in dribblets, in payment for their exports of surplus grain, either to weaving centres or to the Coast towns.

Nor was the system of collecting the revenues such as to tend with any force to a general levelling of conditions. At the close of the 18th century, the Company still only collected the revenues in the districts immediately around Madras, in the Northern Circars, and in certain districts ceded by Mysore in 1792, together with what was called the Poligar

¹ Munro to Read, January 20, 1796 (Baramahal Records).

² Pro. Board of Revenue, March 23, 1793.

³ Public consultations, April 24, 1818, No. 419.

Peshkash in the extreme south. In all these, except in the neighborhood of Madras itself, the fixed rate of exchange tended to keep gold, not silver, in circulation. At first this led to remittances of pagodas to Madras; and at the same time it was advantageous to send rupees out of Madras to districts where a profit could be made on the local difference between the bazaar and the Treasury rates of exchange. The Assumption of the Carnatic in 1802, which established English Treasuries all over the country, and thus multiplied the number of places where the Madras rate was obtainable, must have tended strongly to the general assimilation of conditions and the disappearance of these anomalies.

The Assumption of the Carnatic not only levelled down the price of silver in South India, but also led to a reform of the currency itself. One of the evils from which the country had suffered was a multiplicity of mints, issuing many different kinds of coin; and the first English collectors had to receive on account of the revenue at least 72 varieties of gold and 60 varieties of silver coin. Now that the only mints were English, there was no reason why so evident an inconvenience should be any longer tolerated. Accordingly it was resolved in 1806 that all these different varieties should be reduced to two—the Star pagoda and the Arcot rupee. This great and important reform was gradually carried out by a steady re-coinage spread over a period of nine or ten years.

Meanwhile the Company at home was exercised over the wider problem of Indian currency. In a circular letter to the three Presidencies in 1806 it dwelt on the inconvenience arising both to private persons and to the Company itself from the variety of coins in circulation, and discussed the possibility of establishing a uniform currency for all three Presi-

dencies. For this purpose it considered the rupee the most suitable coin, on account of the prevalence of that specie at Calcutta and Bombay; but at the same time it explicitly declared that it did not wish to discourage the circulation of gold, although, in accordance with the strict monometallism at that time becoming prevalent in England, it declared against establishing a legal rate of exchange between the two metals, as it could not be maintained and led only to loss. Gold coin might however be received at its bullion value.¹ The discussion was prolonged for ten years, and then in 1816 the Company announced its resolution to establish the rupee as the standard of value and the coin of account.²

In this, so far as Madras was concerned, it was doing little but recognise an accomplished fact. In 1812 the Mint Committee had observed that silver had already become the standard of value in the countries dependent on Madras³; and the only region which was mentioned as still possessing any considerable gold currency in 1818 was the Northern Circars. Even the troops stationed in the numerous district garrisons, whose payment in the latter part of the 18th century had caused endless troubles owing to fluctuations of the exchange of the various coins, had in 1816 long been paid in rupees;⁴ while the pagoda had become only a coin of account. In the years 1812-17 the total gold coinage at Madras only amounted to 2,50,000 pagodas a year,⁵ and this was the only source of gold supply for the Carnatic and the dependent districts. Fifty years earlier, the Madras mint alone had coined 6,00,000 or 7,00,000 pagodas a year; the Dutch had coined

¹ Public Despatch from England, April 25, 1806.

² Public Despatch from England, June 12, 1816.

³ Mint Committee's Report, April 12, 1812.

⁴ Public Consultations, January 7, 1818.

⁵ Parliamentary Return of 1864.

4,00,000; and the divers mints of the Nawab had issued a large though indeterminate quantity. Thus the gold coinage had shrunk certainly to less than a quarter, probably to less than a fifth, of its former volume; and it had long since fallen to the point at which the issues failed to make good the losses. When, then, in 1818 the rupee replaced the Star pagoda as the money of account, the change was but nominal.

Looking at the whole process broadly, we find it an interesting example of the operation of large causes, in which regulation counted for very little. In the 17th century the relative value of silver was much higher in India than in Europe; silver also formed the currency of Northern India, which then as now produced the bulk of the exports to the West. The European nations had thus every motive for buying those exports with silver rather than gold. However the Coromandel Coast formed an exception to these conditions. The existence of gold deposits in the South, though neither very rich nor very extensive, had in the first instance permitted the establishment of a gold currency. The trade with the Archipelago and China brought in enough gold to permit its maintenance, in spite of a steady drain northwards and inland. Then came the development of a considerable trade with Europe. At first the Coromandel cloth was bought mainly with gold imported from the West. But, as the volume of silver was accumulating in Europe much more rapidly than that of gold, and as the value of silver was tending to fall, the latter metal began to be sent in large regular quantities to the South as well as to the North. At first this involved considerable difficulties, partly obscured by the debasement of the normal currency of the country. Meanwhile the establishment of a Moghal subahdar at Arcot had led to the introduction of the rupee. This tendency was strengthened by the

wars between the French and the English and between the English and Mysore. Up to 1793, however, the stock of gold in circulation in all probability had not absolutely declined, although it had fallen relatively to the volume of trade. After 1793, when the principal imports were cut off by the exclusion of Dutch commerce, and only replaced by spasmodic imports from Bengal, the stock began to waste by the drain inland. At this time the silver in circulation seems to have been distributed with great irregularity, and its value varied much from district to district. But this inequality was rapidly reduced by the influence of the district treasuries as soon as British administration was extended over the Carnatic in 1802. In these years the coinage of rupees, both on public and private account, was abnormally large. Thus the value of gold in silver gradually rose in the districts until it exceeded the rating which had been established at Madras. Once this overvaluation of gold had disappeared, the currency of gold was doomed. All the influences of convenience, the love of jewellery, the passion for hiding one's wealth, contributed to bring the Southern part of the peninsula into line with the richer Northern provinces. The gold which was sent into circulation thereafter—and certain quantities were coined and issued long after 1818—was liable to constant subtraction. It was, in fact, in much the same position as the sovereigns which circulated in India in 1913. In the East, as elsewhere, when both metals are unlimited legal tender gold can only be maintained in circulation by being overvalued as currency. The currency of gold at Madras vanished with the disappearance of that overrating.

COINAGE IN THE MADRAS MINT, 1767-1804
(000's omitted)

Year	GOLD					SILVER			TOTAL
	Madras Pagodas. 1	Star pagodas			Total Gold in Star Pagodas. 2	Rupees			Coinage in Star pagodas 3
		Private	Coy.	Total		Private	Coy.	Total	
1767	171	268	43	312	500	609	251	863	750
1768	236	141	510	682	931	51	181	236	998
1769	307	21	413	433	750	116	34	151	793
1770	359	122	..	122	516	358	..	358	616
1771	240	..	179	179	430	840	..	840	670
1772	346	62	2	64	444	545	..	545	597
1773	217	526	..	526	763	445	..	445	890
1774	260	250	...	250	536	404	6	410	653
1775	358	249	..	249	642	253	..	253	714
1776	42	803	..	803	849	131	..	131	886
1777	38	653	..	653	704	220	55	275	783
1778	169	399	230	629	814	415	46	461	946
1779	217	254	228	482	720	160	...	160	769
1780	101	1152	53	1205	1316	256	265	521	1465
1781	259	254	295	549	823	172	1005	1177	1159
1782	489	..	723	726	1263	194	779	973	1544
1783	555	16	114	130	740	80	266	346	839
1784	494	21	189	210	742	285	273	558	899
1785 4	...	...	..	..	...	..	..	..	..
1786 5	185	270	..	270	473	123	29	152	516
1787	312	232	..	232	573	90	..	90	599
1788	310	191	..	191	522	95	..	95	549
1789	429	181	..	181	652	90	...	90	878
1790	93	212	408	651	753	266	1155	1721	1215
1791	144	215	516	731	889	323	8036	8359	3219
1792	368	123	781	905	1309	...	84	84	1323
1793	198	434	545	980	1197	270	..	270	1271
1794	117	148	107	255	384	418	..	418	563
1795	186	4	10	15	219	339	...	339	316
1796	143	2	224	227	384	282	..	282	454
1797	70	8	587	595	672	179	535	715	876
1798	78	17	223	245	430	869	2149	3019	1191
1799	301	6	217	223	554	63	4102	4165	1741
1800	416	..	..	..	457	530	1296	1827	950
1801	320	..	..	..	352	496	3435	3931	1475
1802	..	240	96	337	337	2344	1147	3542	1319
1803	..	253	281	534	534	3136	4784	8220	2880
1804	...	111	370	481	481	1796	4931	6727	2403

¹ All the Madras pagodas coined in these years, with one exception too trivial to be shown, were on private account

² Madras pagodas valued at 10 per cent more than Stars.

³ The rupee is converted at 350 per 100 pagodas.

⁴ Accounts are missing for this year.

⁵ Accounts are available for eight months only of this year.

CLASSIFICATION OF THE ECONOMICS SECTION OF A LIBRARY

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The Library of the University of Allahabad was established in 1915, and the principle of arrangement adopted from the commencement was the grouping of books in Departmental Sections corresponding, so far as practicable, with the new departments of the University. The Professor in each subject was given control over his section of the University Library. The consequence of this is that the Professor was able to adopt that arrangement and classification of the books which seemed best adapted for the purposes of teaching and study. A further convenience for teaching and reserch work was an arrangement whereby each departmental section of the University Library might, to a large extent, be kept in the Seminar Room permanently allotted to the Department concerned, transfers of books being made from time to time, at the instance of the Professor, as between the main University Library and the portion kept in the Department.

A subject classification of the books was made the basis of the arrangement and numbering from the commencement. As regards the University Library

in general, it was decided to adopt the Dewey system in outline; but it was left to professors to make their own classifications in the subjects of their departments, if they so desired, such classifications to be capable of being fitted into the Dewey system.

It is well-known that the Dewey system is ill-adapted to the classification of an academic library of economics—the separation of commerce and communications (Dewey 380-389 and 656-659) from the main part of economics (Dewey 330-339), the absence of any adequate provision for economic history, and many other deficiencies, make that classification most unserviceable. It is particularly troublesome to the student of economics to find that related subjects in which he is interested, such as the law of rent, agriculture, and the history of these subjects, and studies of the grain trade, are scattered about in the library in four absolutely different places; and that there is no place whatever for rural economics, and social surveys.

There is, of course, no logical classification which will bring together all subjects in the groupings which would be most convenient for different readers. The Dewey system, and others of that character, may be very useful for public libraries, and are indeed fairly established. The needs of a University Library, however, are different; and, so far as I am aware, no general classification of books has yet been prepared for that purpose. The essence of such a classification for University purposes must be to group subjects and their subdivisions in the manner adopted for the purposes of teaching in the Universities. For convenience subjects are grouped in departments, each under the control of its Professor. These should be the major groups of the University Library classification; and in practice each might be designated by a letter. Within the Department, a numerical system

of classification can be adopted, being decimalised if necessary. The classification adopted for the Economics Section of the Allahabad University Library now to be described will illustrate what is meant.

The classification just mentioned is not a perfect example of the departmental system which I advocate; because it was necessary to have regard to the fact that it was decided to adopt the Dewey system for the main part of the University Library. It was necessary therefore that any departmental system of numbering should be made capable of being fitted into the Dewey system. The Dewey system allots the numbers 300 to 399 to what is broadly called Sociology, which covers a wide range of subjects from sociology, in the restricted sense, through economics (part of), education, international law, constitutional law and practice, and political philosophy, to ethnology, folk-lore, and the customs of war. I desired to divide the whole subject of economics as usually understood in Universities, and the scope of which may be judged from the Calendar of the London School of Economics, into 10 major divisions and 1,000 subdivisions. However, to secure symmetry in the library classification as a whole, it became necessary to include within my 1,000 subdivisions all the main subjects included by Dewey in this numbers 300 to 399. I therefore followed the plan of allotting comparatively less space to the non-economic groups. This is a admittedly a compromise plan; but under the circumstances it was the best that could be adopted.

This classification of the books on economics is not published with any idea of regarding it as a perfect model; for it has several imperfections which were only realised after the classification was in use and the books numbered, so that it was difficult to make any change. With all its imperfections, however, the

classification seems to be of some importance and interest both as a guide to students in exploring the very voluminous literature of economics and as a suggested basis for the arrangement of University and college libraries.

I am a great believer in the open-shelf system in all academic libraries; and hold that students should be freely admitted, under proper rules, to select books from the shelves themselves. It is impossible to over-estimate the amount of real education which an earnest student may acquire for himself by dipping into many volumes on the shelves of a library, and at times by a diligent search in books, journals and pamphlets for theories and facts bearing on any subject in which he is interested or on which he is writing an essay. It is a very great advantage to the teacher also to have the books in his department classified into subdivisions based upon those which are naturally adopted in allotting subjects to lecture courses and subdividing the latter. When he has to prepare a lecture on any given subject, he may go straight to a given shelf and find together all the books in the Library dealing with his subject from a particular point of view. Many books have titles which do not correctly describe them, and books treating a subject from totally different standpoints may yet have titles practically the same, so that Librarians would without hesitation put them in the same subdivision. It is a fundamental condition of the classification here presented that books are classified according to subject-matter and their method of treating it, and not merely by their titles. The advantage of this to the lecturer is that he will not be worried by the presence of books which, though apparently rightly classified according to their titles, have in reality only a superficial relation to those subjects in which he is interested.

In compiling this classification I have drawn by way of suggestion largely on the classification adopted in the Library of the London School of Economics as published in its Calendar. However, after deciding on the main outlines of the classification, I found that the only practicable course was to construct the subdivisions by actual examination of the books themselves and tentative arrangement of them on the shelves. This proved to be highly illuminating and interesting work, if somewhat time-absorbing. I found that I had previously known comparatively little about economic literature and its numerous ramifications. This, I think, then is the value of the classification—that it is based upon an examination of a wide range of books in the English language, including many relating to India and a representative selection of those dealing with economic conditions in all parts of the world. The Library has only a few books in French, German and Italian and these mainly in economic theory, statistics and history.

It will be of advantage to review briefly the characteristics of the ten principal divisions into which the classification falls. The numbers and titles are as follows:—

001—099 SOCIOLOGY

This covers sociology (in restricted sense), social psychology, anthropology, ethnology and geography as viewed from the human and cultural standpoint. In this classification geography is not treated as a homogeneous subject, but as being auxiliary to the main divisions—sociology, economics, commerce, etc.

100—199 ECONOMICS

This group embraces all the theory of economics. It also includes all general economic treatises which have a theoretical treatment and are not merely descriptive; all works on economic history; all books on the theory of

statistics; and all works on economics or any part of it of a theoretical character or treating the science inductively or deductively.

200—299 SOCIAL ECONOMICS

This class contains all books of a general descriptive character dealing with the social conditions of the people, with pauperism and unemployment, and all forms of labor problems. Wages are dealt with here in a descriptive and statistical manner, the theoretical treatment being, of course, included in Economics (100-199). All works relating to labor problems, housing reform, town-planning, and co-operation also find their place here.

300—399 DESCRIPTIVE ECONOMICS

This section is entirely devoted to descriptive economics, excluding, however, transportation, and finance, currency and banking. Under the heading Descriptive Economics books describing every kind of industry find their place, and all engineering works other than those on transportation. Descriptive economics has two aspects: descriptive according to function, that is, usually by industry, or type of organization; and descriptive by place, that is a regional or geographical treatment. Prominence is given to both methods.

400—499 COMMUNICATIONS AND COMMERCE

Everything connected with roads, railways, canals, rivers, ocean navigation and posts and telegraphs, is included here; also all books on commerce, as the word is properly used—that is to say books describing the commercial activities of different regions or countries. Everything in the numbers 450 to 479 must have a geographical aspect. (For *commercial policy* see 530, *commercial practice and law* 630; for *commerce*, meaning trade in particular commodities, see 300-379 and for *history of commerce* see *economic history* 170, etc.)

500—599 FINANCE, CURRENCY AND BANKING

This covers the whole of public finance (except municipal finance, see 862), and private and joint-stock finance, banking, stock-exchanges, currency and commercial policy.

600—699 PRIVATE BUSINESS AND ADMINISTRATION

This class consists entirely of books of a practical character written for the use and guidance of persons engaged in the various occupations and not intended to be descriptive or scientific treatises on the various subjects. Thus, books describing how to manage a business, a works, or factory come here. In the interest of the study of economics, however, it is not always desirable to carry out this classification to logical completeness. For example, books dealing with the various operations of cotton or woollen mills ought to be put here, because they are written for the use of technical managers and designers. Yet such books are of service to the students of economics for purposes of information as to the nature of the technical processes and point of view of those engaged in the management. Such books are in fact "museum specimens" for the economist; and it is more convenient for him to find them ranged beside the frankly economic and descriptive works dealing with the same industries.

700—799 EDUCATION

This covers the whole ground of education from kindergarten to university standards, both in theory and practice, with subdivisions for descriptive accounts of education in various countries.

800—899 POLITICAL SCIENCE, ADMINISTRATION AND LAW

(This is printed only so far as political science and administration are concerned).

900—999 SOCIAL CUSTOMS

This deals with all kinds of social customs, such as those of costume and ornament, marriage, treatment of the dead, public ceremonies, recreations, legal and political status of women, folklore, nomadic races, proverbs, customs of war, etc.

If the foregoing explanation of the character of each class is carefully read and properly understood, it should not be difficult to classify any books according to this system.

It may be added that the numbering of the classification here printed is easily adaptable to fitting it into the Dewey decimal system. To effect this it is only necessary to put the figure 3 in front of every number in the present classification. Thus, 122 becomes 3122, which is more conveniently written 3 122, the space being left so as to call attention to the fact that it is an adaptation of the departmental classification. If it be desired to make the numbers similar in appearance to those of the Dewey system, it may be written 312.2. These means exactly the same thing; but the system of writing the number either 3122 or 3 122 is adopted in the University Library in order to avoid any possibility of confusion in case the figure following the decimal were omitted.

It may be of interest to know that it has been found entirely practicable to adapt this classification to a general filing system for information, notes, pamphlets etc. on all branches of the subject of economics. The files are numbered in precisely the same classes as the books; but often there is a large number of files in one subdivision. In any subject in which research is being carried on in the department, or in which the literature and information has become voluminous, as, for example, on Indian

currency and exchange, it has been found convenient to subdivide the library subdivision for that subject by adding numbers to the extent of one or two decimal places. We may therefore have such a number as 3533.21. In addition letters *a, b, c, d, e* are added after the numbers in order to distinguish files according as they relate to original memoranda, to matter in course of preparation for the press, to correspondence, or printed matter, etc.

CLASSIFICATION OF THE ECONOMICS SECTION OF THE ALLAHABAD UNIVERSITY LIBRARY

This will be sufficient introduction to the classification, which now follows.

(Many subdivisions are left blank to be filled later,
and are here omitted.)

- 30 SOCIOLOGY: General Works
- 31 do. Text books
- 32 do. Bibliographies
- 33 do. Dictionaries and Encyclopedias
- 34 do. Essays and Addresses
- 35 do. Periodicals
- 36 do. Year Books
- 37 do. Biographies of Sociologists
- 38 do. Methods of Sociology
- 39 do. History of Sociology
- 40 Social Psychology
- 45 Social Ethics
- 47 Moral ideas, origin of
- 50 Social Evolution
- 52 Civilization, evolution and history of
- 53 Civilization, theories of
- 54 Progress, theories of
- 60 Experimental Sociology
- 65 Special Sociological Studies

70	Heredity
72	Family and the State
73	Sex, Evolution of
74	Sex, Social aspects of
75	Eugenics
78	Anthropology
80	Regional Sociology
85	Ethnology
90	GEOGRAPHY (human and cultural)
91	„ British Isles
92	„ Europe
93	„ Asia
94	„ India
95	„ North America
96	„ South America
97	„ Africa
98	„ Australia
99	„
100	ECONOMICS
101	„
102	„
103	„ Dictionaries and Encyclopedias
104	„ Essays and Addresses
105	„ Periodicals
110	GENERAL TREATISES—Early English
111	„ „ Classical English, Adam Smith to Ricardo
112	„ „ Late Classical (1830-1870)
113	„ „ Early English and Classical Foreign
114	„ „ Modern English and American General
115	Controversial General Books
116	Psychological School of Economics—Treatises
117	Mathematical economic treatises
118	Modern text-books of economics in English, with Indian or Colonial illustrations.
119	
120	Elementary Text-Books of Economics
121	Scope and Method of Economics
122	Ethical Aspects of Economics

- 123 Economics of Property and Contract Law
 124 Theoretical Descriptive general books on economics¹ England
 125 " " " " " America
 126 " " " " " India
 127 " " " " " Elsewhere
 130 Economic Statistical Descriptive Books² : England
 131 " " " " " America
 132 " " " " " India
 133 " " " " " Elsewhere
 134
 135 Statistical Collations—general, on many subjects,
 wholly or partly economic
 136 History of Economic Theories: General
 137 " " " Ancient
 138 " " Special (dealing with particular periods
 or countries)
 139 Biographies of Economists
 140 PRICES AND MARKETS: General
 141 Prices, Theory of
 142 Prices, Statistical works on
 143 Trade Cycles and Fluctuations
 144
 145 International Trade
 150 Distribution, General Theory of
 151 Monopolies, Theory of
 155 Capital and Interest
 157 Wages, Theory of
 158 Population, Theory of
 159
 160 Land and Rent, Theory of
 161 State Ownership: Nationalization of Land
 165 Land Tenure Rent and Revenue (Theoretical).
 166 Land Laws (Theoretical)
 170 ECONOMIC HISTORY
 171 " " England—General
 172 " " Elementary text books

¹ This class of books is distinguished by the union of a presentation of the theory of economics with the description of the economic character and facts of a particular country.

² This class includes books which describe the general commercial and economic condition of countries with statistics, but with no theoretical discussion of the economic conditions and with no advocacy of any particular policy.

- 173 Towns, Guilds, Boroughs and the Industrial Revolution,
England
- 174 Agricultural and Rural Economic History, England
- 175 Economic History Continental European Countries
- 176 ,, N. America
- 177 ,, India
- 178 ,, Elsewhere
- 179 Ancient Times, Economic History of
- 180 EVOLUTION OF INDUSTRY
- 181 Economic Factors and Policy in History
- 182 Evolution in relation to economic progress
- 185 Communal (or Social) economic theory
- 188 War, economics of
- 190 STATISTICS : GENERAL
- 191 Statistics, Theory and Method
- 192 Mathematical
- 193 Population and Vital Statistics General
- 194 ,, ,, ,, England
- 195 ,, ,, ,, India
- 196 ,, ,, ,, Other Countries
- 197 ,, ,, ,, Special Topics
- 198 Incomes, Statistics of
- 200 SOCIAL ECONOMICS : GENERAL
- 201 ,, ,, Theory
- 202 ,, ,, Descriptive-General
- 203 ,, ,, England
- 204 ,, ,, America
- 205 ,, ,, India
- 206 ,, ,, Elsewhere
- 207 Regional Surveys
- 208 Social Surveys (Cities)
- 209 Social Service General
- 210 PAUPERISM AND DESTITUTION
- 211 Poor Law Reforms
- 212 Betterment and Relief Work
- 213 Women and the Poor Law
- 214 Pauper Labor
- 215 Old Age Pensions
- 216 Alms giving and Charities
- 217 Children and Poor Law Schools
- 218 Famines

- 219 Pauperism in various countries
- 220 UNEMPLOYMENT AND CASUAL LABOR
- 221 Conferences on Unemployment
- 222 Causes and Effects of Unemployment
- 223 Methods for Dealing with Unemployed
- 224 Unemployment Insurance
- 225 Labor Exchanges
- 226 Juvenile Advisory Committees
- 227 Apprenticeship Committees
- 228 Other voluntary agencies
- 229 Immigration and Emigration
- 230 LABOR QUESTIONS IN GENERAL—Conferences and Commissions
- 231 Labor, State in relation to—theoretical
- 232 Labor, History of State policies and legislation
- 233 Labor legislation—general
- 234 Factory System and Legislation
- 235 Occupational Diseases and Sanitation
- 236 Sweating System, Home Industries; Labor of women and children
- 237 Mining and Plantation Labor
- 238 Agricultural Labor
- 239 Labor in various countries
- 240 WAGES AND CONDITIONS OF WORK—General
- 241 Wages, Descriptive and Statistical treatment—England
- 242 " " " —various countries
- 243 Methods of industrial remuneration
- 244 Piece-work Rates
- 245 Wages and cost of living
- 246 Regulation of Wages (Minimum Wage)
- 247 Hours of Work (including eight-hours day movement)
- 248 Shop Assistants and Clerks
- 249 History of Wages
- 250 TRADE UNIONISM AND GUILDS
- 251 Trade Unionism, treatises, etc., on
- 252 Trade Union Councils, Congresses and Federations
- 253 Trade Unions and the Law
- 254 Trade Unions—England
- 255 Trade Unions, History of
- 256 Trade Unionism in various countries
- 257 Strikes
- 258 Conciliation and Arbitration

- 259 Guilds (Modern, producing and labor)
- 260 ASSURANCE—General
- 261 Workmen's Insurance
- 262 Sickness Insurance
- 264 Old Age Assurance
- 265 Life Assurance
- 266 Fire Insurance
- 267 Employer's Liability
- 268 Benefit Societies
- 269 Insurance in various countries
- 270 HOUSING PROBLEM
- 271 Urban Housing (including industrial towns)
- 272 Housing in various countries
- 273 Rural Housing and "Back to the Land"
- 274 Housing, and Town Planning—various countries
- 275 Town planning
- 276 Garden Cities
- 277 Housing and Town Planning—India
- 278 Town Planning—India
- 279 City Surveys—general, and for town-planning
- 280 CO-OPERATION—General
- 281 Co-operation, Distributive
- 282 Co-operation, theory of
- 283 Co-operation—India
- 284 Co-operative Farming
- 285 Co-operative Production
- 286 Co-operative Credit Societies
- 287 Employer's Co-operation
- 288 Consumers' Leagues
- 289 Other Co-operative and friendly Societies
- 290 CO-PARTNERSHIP—Industrial (including Profit-sharing)
- 291 Profit-sharing
- 293 Temperance Movement—England
- 294 " " — Europe
- 295 " " — America
- 296 " " — India
- 297 Betting and Gambling
- 300 DESCRIPTIVE ECONOMICS
- 301 Descriptive of Commerce and Industries—general
- 302 Dictionaries of Commercial Products and Industrial Arts

- 303 Industrial Conferences and Commissions, Exhibitions, etc.
- 304 Chambers of Commerce Reports, Rules and Regulations
- 305 Technical and Commercial Societies, proceedings and reports
- 306 Trade and Commercial Year Books and catalogues
- 307 Directories and Commercial Guide Books
- 309 Professions, Journalism, Art, etc.
- 310 TRUSTS AND INDUSTRIAL COMBINATIONS
- 311 " " " America
- 312 " " " Europe
- 313 Industrial Organization
- 314 Joint Stock Companies, economic studies of, as form of
Industrial Organization
- 315 Unfair Competition and illicit practices
- 316 Adulteration, descriptive
- 318 Workshop and Home industries—England
- 319 " " " India
- 320 RURAL ECONOMICS
- 321 " " India
- 322 " " England
- 323 " " America
- 324 " " Elsewhere
- 325 Rural Economic Development—(including colonization
schemes)
- 326 Agricultural Credit and Indebtedness (See also Co-opera-
tive Societies)
- 327 Agricultural Land Tenure (Descriptive)—English Speaking
Countries
- 328 Land tenure, rent and revenue, and assessment, India
- 329 " " " Non-English-speaking countries
- 330 AGRICULTURE AND FORESTRY, Economics of
- 331 Agriculture, Technical, Science of—general
- 332 Agriculture, general, India
- 333 Agriculture, England
- 334 " Western Europe
- 335 " America, North and South
- 336 Agriculture, general, Russia, China, Japan, etc.
- 337 Irrigation
- 338 Plantation Industries,—Rubber, Tea, Coffee, etc.
- 339 Forestry and Economic Botany
- 340 MINING AND FISHERIES
- 341 Coal Trade and Mining, India

- 342 Coal Trade, elsewhere
- 343 Precious Metals
- 344 Other Metalliferous Mining
- 345 Quarries
- 346 Mineral Oil Industries
- 347 Superficial deposits—Nitrates, Salt, Asphalt
- 348 Sea Fisheries
- 349 River Fisheries
- 350 ENGINEERING WORKS
- 351 Public Works—India—general
- 352 Bridges
- 356 Irrigation Canals and Dams, (Technical)
- 357 Electrical Generating Stations
- 358 Hydro-electric power schemes
- 359 Power, sources of, and prime movers
- 360 TEXTILE INDUSTRIES—General
- 361 History of Cotton Manufacture and Trade
- 362 Cotton, raw, growth of, and trade in
- 663 Cotton Spinning and Weaving, India
- 364 " " " United Kingdom
- 365 " " " Continent of Europe
- 366 Cotton Industry, America and elsewhere
- 367 Other vegetable fibre textile Industries
- 368 Woollen and worsted and silk Industries—All countries
- 369 Textile Operation and Machinery—general
- 370 OTHER MANUFACTURING INDUSTRIES
- 371 Iron and Steel Industry—Europe
- 372 " " " —America, India, etc.
- 373 Tin plate industry
- 374 Hides, Leather and Tanning
- 377 Oil industry
- 378 Paper-making and wood pulp industries
- 379 Flour milling, etc.
- 380 REGIONAL—INDIA
- 381 Bengal
- 382 Bombay
- 383 Madras
- 384 United Provinces
- 385 Punjab
- 386 Central Provinces and Berar
- 387 Burma

- 388 Native States
- 389 Elsewhere
- 990 REGIONAL—ELSEWHERE
- 391 Europe—General
- 392 England
- 393 Western Continent of Europe
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- 600 PRIVATE BUSINESS AND ADMINISTRATION—General Works
- 601 Management of Private Affairs
- 602 Domestic Economy
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- 606 Reports, Societies' transactions, etc.
- 607 Education for business career
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- 611 " " —theory of
- 612 " " —elementary
- 613 Dictionaries, Cyclopedias
- 614 Special—not elsewhere included
- 615 Secretarial work
- 616 Text books for Clerks
- 617 Office routine
- 618 Filing
- 619 Graphic methods in business
- 620 FINANCE, PRIVATE—General
- 621 Joint Stock Companies, practical working of (Manuals
 for Secretaries, Accountants, etc.)
- 622 Joint Stock Companies, accounts, books on, and forms for
- 623 Flotation of companies and financing industrial enterprises
- 624 Re-organizations and amalgamations—Companies and firms
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- 647 Advertising Schemes, practical manuals
- 650 MANAGEMENT—General
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- 654 Cost Accounting
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- 656 Scientific Management
- 660 MANAGEMENT OF LABOR
- 661 Selection and control of workmen
- 662 Fatigue and overstrain (including working hours)
- 663 Methods of remuneration (practical details of wages systems)¹
- 664 Workers' welfare
- 670 EFFICIENCY—General works on, in all occupations
- 671 ,, Special works on in, various occupations
- 672 ,, of Manual labor
- 673 Psychology of mental operations of business
- 674 Psychology of manual operations
- 675 Environment and efficiency
- 680 SPECIAL BUSINESSES AND TRADES
- 681 Engineering Workshops
- 682 Textile Mills
- 683 Printing Trade
- 684 Contracting and Constructional Works
- 690 BUSINESS CALCULATORS AND TABLES
- 691 Multiplication, Logarithm, and Mathematical Tables
- 692 Commercial Ready Reckoners, and Mensuration for Commercial purposes
- 693 Interest, Compound Interest, bond and sinking fund tables
- 694 Share Tables
- 695 Income and Wages Tables
- 696 Income tax and percentage profit and estate duty tables
- 697 Foreign exchange tables
- 700 EDUCATION—General

¹ Cf. 243 which includes general descriptive books only, such as Schloss's *Methods of Industrial Remuneration*. This subdivision, 663, contains books on special wages systems with full explanations of details for working them.

800 POLITICAL SCIENCE**801** Political Science—Theory, etc.**802** Compends, Outlines**803** Dictionaries**804** Essays, Lectures, Speeches**805** Periodicals, Encyclopedias**806** Societies**807** Education**808** Collected works, etc.**809** History of Political Science**810** STATE AND FORM OF GOVERNMENT—Various Countries**811** Family, Patriarchal Science—Social and Political**812** Tribes, Clans, Village Communities—social and political**813** Feudalism—social and political treatment**814** Monarchy—Aristocracy and Bureaucracy, Imperialism**815** Democracy and Republicanism**816** SOCIALISM—General**817** Socialism—History and Biography**818** Socialism—Continental Schools**819** Syndicalism**820** COLLECTIVISM AND COMMUNISM**821** Anarchism**822** Political Parties and Party Conventions, etc.**823** International Policies and Statesmanship**824** Political Struggles, unrest and revolutions**825** Internal Relations with groups and Individuals**826** Movements and questions of Nationalities, Races and Languages**827** The State and Social Groups (Churches, and Associations)**828** The State and the Individual**829** Citizenship**830** Immigration**831** Suffrage**832** Women's Suffrage**833** Slavery**834** Colonies and Colonial Expansion**835** International Relations and Policy**836** International Arbitration (Hague Conferences)**837** International Law**838** World States, International government (Commonwealth of Nations), Peace Leagues, etc.**839** International Treaties

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CURRENT NOTES

The feature of the economic situation in India since our last issue (July) has been the adverse balance of trade and the consequent weakness of exchange. The sales of reverse Councils were continued throughout the summer at the rate of £1,000,000 weekly, but were discontinued at the end of September. Exchange fell immediately, and has remained weak ever since, with a tendency to weaken further. There appear to be three principal factors combining to produce this result: (1) the very heavy orders for goods of all kinds given by importers during the first half of the present year, bills for which are still coming to hand for payment; (2) the general fall of world prices which became pronounced in the later part of the summer and operated to curtail exports; (3) the weak monsoon, which has necessitated close control of the export of food grains—our only important commodity of export for which there seems to be an insatiable world-wide demand. The instability of exchange is, however, itself a factor in the continuance of the adverse trade position, because exporters are so uncertain as to what the rate of exchange might rise to by the time their goods are shipped that they scarcely dare to quote prices in foreign currencies.

The general fall of world prices is becoming, however, more and more the dominating feature in the

economic situation in India. The fall of prices began in America during last summer and about the same time in England. The following monthly index numbers of prices in Great Britain¹ illustrates this:—

January	245
February	260
March	262
April	266
May	260
June	256
July	255
August	254
September	249
October	240

In all directions there are reports of stagnation in trade, the growth of unemployment, and all the other phenomena usually associated with the commencement of the collapse of prices after a period of boom.

It is perhaps worth noting that the exact year of the turn of the commercial tide would seem once again to have been determined by cosmic influences expressing themselves through the harvests. If the reader will turn to Vol. II, Part 1 of this Journal, page 43, he will see given a list of the years of maximum prices and of the intervals between them. If we may now add 1920 as the next maximum after 1907, as appears probable, we shall find that this fits in fairly satisfactorily with the data as to the frequency of periods of different lengths. On page 45 were given the intervals of the trade cycles from the year 1670 to 1907; and we may now add another period of 13 years. The maxima of the frequency curve for the length of the trade cycle now stand out clearly at 7, 10 and 13 years. If the War had not

¹ From *The Statist*, Nov. 13th, 1920, p. 773.

occurred, we should almost certainly have had a maximum in 1914, and possibly the next maximum would have occurred in 1921, giving two seven-year periods.

The announcement of the death of Mr. Percy Anstey, which took place on November 23rd, came as a painful shock to his many friends in India, amongst whom are a large number of economists. Mr. Anstey came to India from the London School of Economics where he had studied after abandoning his former profession as an actor. In that he had been successful; but he felt drawn to serious studies and wished to devote himself to teaching. He came to India as the first Principal of the Sydenham College of Commerce; and he has not only held this post for six years with distinction, but gained the respect and affection of a large circle of students and friends. It is due mainly to his efforts that the Sydenham College of Commerce has already gained great reputation in spite of the very severe difficulties which handicapped its development during the War period. It was housed in a top-flat of a commercial building in Hornby Road, because money for the projected buildings could not be found during the War; but still more serious was the difficulty that the trained and experienced teachers which it had been intended to bring from England were for the same reason unobtainable. Mr. Anstey collected the best men he could find in this country and created a thoroughly efficient staff. Economists will remember Mr. Anstey as the genial and hospitable Honorary Local Secretary of the Indian Economic Association during its Second Conference, which was held in Bombay two years ago. Besides his official duties, Mr. Anstey had many public activi-

ties, amongst which not the least onerous was his membership of the Bombay Corporation.

It seems desirable to call the attention of economists in India who are fellows of the Royal Economic Society of London to the fact that they are not entitled to use the letters F. R. E. S. after their names. We learn from the Secretary of the Society that the charter of the Society which granted it permission to style itself "Royal" did not grant the fellows the right to use the letters F. R. E. S., on the ground that this might create confusion in the minds of the public with fellows of the Royal Society and of a few other old societies which have had this privilege for many years. The fellows of the Royal Economic Society are entitled, however, to place the letters F. E. S. after their names.

We have received a recent Report of the Librarian of Congress (U. S. A.), and we notice in it a section dealing with the Legislative Reference Service. This was established about seven years ago for the purpose of furnishing to members of the Senate and of the House of Representatives reliable and up-to-date information on any subject connected with legislative bills in course of passage through either house. Private members may also avail themselves of the service in connection with any legislative measures they have under consideration, and in which they require information, suggestions, and assistance in drafting. Thus the range of subjects on which inquiries were addressed to the Service is extremely wide, as shown by the extensive list given in the Report. The total of 1,280 inquiries in one year is scattered over all kinds of legal,

historical, social, economic and statistical subjects; and it requires the resources of a great Library to supply all this information. There can be no two opinions, however, as to the utility of the service in (1) reducing the number of questions in the House of Representatives which are merely requests for information, (2) reducing the labor of the staff of the secretariat offices in finding information for Ministers both for legislation and for replying to questions, (3) enabling bills to be drafted with all apposite information to hand, thus saving the time of the House, (4) in reducing controversy to questions of principle and policy by eliminating doubt as to facts, (5) promoting legislative progress by marshalling for inspection and comparison the acts and bills of every legislature of the world on any desired subject. May it not be worth considering whether a Legislative Reference Bureau should not be attached to each Legislature under the new Reforms Scheme? It would give point to the debates and greater efficiency in the laws if information difficult of access were thus to be made available to the non-official as well as to the official members.

REVIEWS OF BOOKS

RELATING TO INDIA

The Trade Relations between England and India (1600-1896)

BY C. J. HAMILTON, M.A., Minto Professor of Economics,
Calcutta, Thacker, Spink & Co. 1919. pp. vii, 263. Price
Rs. 5.

Mr. Hamilton's volume is a valuable contribution to the economic history of Modern India. In no field of study is dispassionate enquiry more desirable, partly because previous works dealing with economic India in the 18th and early 19th centuries have been based rather on ingenious conjecture than on critical research; partly because the subject-matter of economics touches every man in the most intimate fashion, and so lends itself to political uses. The trade relations between India and England for example have offered scope for two most divergent views. The average Indian undoubtedly believed that the Indian cotton industry was killed of set purpose by English commercial policy; the average European believed that it was killed by the development of new methods of production; but neither was able to give much reason for the faith that was in him. Mr. Hamilton's book is well calculated to raise the discussion to a higher plane than that of prejudice.

The subject is large, and the material voluminous. It cannot therefore be disposed of in a single slender volume. Before any definitive judgment can be formed, a score of monographs must be composed and digested. The history of the company's trade with each of its presidencies, for example, still lies buried in hundreds of manuscript volumes; so that there are years of work for many workers before the concrete facts, which must form the basis of such a work, can be

objectively established. The value of Mr. Hamilton's labors resides in his having made that task easier of accomplishment, by a dear and cogent analysis of the existing information.

The trade relationship between Great Britain and India may be considered under three principal aspects—the effects of English restrictions of imports into England; the effects of unrestricted English exports to India; and the effects of the resultant balance of indebtedness on India.

Restriction of imports of certain classes was a regular and normal feature of English commercial policy; but Mr. Hamilton has no difficulty in showing, by a very careful analysis of the English import laws, that it was very seldom directly aimed at India. The chief instance was the act prohibiting the wear of Eastern wrought silks and painted calicoes. This has been occasion of more than one misstatement. The *Imperial Gazetteer* (which should have known better) transforms the act into a prohibition of import, which it was not. Wrought silks and painted calicoes were regularly bought and shipped home on the company's account all through the 18th century, for re-export to Northern and Central Europe. List extends the act into an absolute prohibition of all silk and cotton fabrics—"Not so much as a thread of them," says he, "would England permit to be used." This of course is ludicrous. Calicoes—long cloths and salampores, for instance—were largely imported and worn in England, until the English cotton-industry sprang up at the end of the century. It is true that duties were imposed; and under the pressure of war, the duties were sometimes very high: Thus the duties on plain white calicoes, which in 1800, were 20 per cent, in 1805 rose to 66, in 1812 to 71, and in 1818 to 88 per cent. These are the duties which are supposed to have killed the Indian weaving industry. Chronology however does not support this view. By 1789 a hundred and forty-three cotton-mills were already at work in England. Before 1790 the export of English cotton goods exceeded a million sterling; it doubled by 1795, and doubled again by 1800. Furthermore, at this time the English cotton industry was subject to considerable excise duties, which must have acted as a set-off against the import duties payable by Indian piece-goods, but which latter were refunded on that part which was re-exported abroad. English cottons paid excise no matter whether they were consumed in or out of the country; Indian cottons consumed abroad paid no English

duty; English exported cottons and Indian cottons re-exported from England would pay the same rate of duty at the country of import. The rapid growth of English exports shows therefore that, before the imposition of heavy war-duties, the English manufacture, with its machinery and large-scale production was already beating the Indian cloth on neutral ground. We conclude (with Mr. Hamilton) that Indian calicoes were not driven out of the European markets by high duties imposed by English policy.

The case of the tariff system established in India by the Company, which permitted the import of British cottons on terms which enabled the latter largely to oust Indian goods, stands on a somewhat different footing. It is certain that no such duty was imposed as would have permitted the old-fashioned Indian industry to compete with the imported goods. But it is equally certain that this was no Machiavellian policy designed against Indian interests. The Company's despatch of 1823, which Mr. Hamilton quotes, is very instructive in this connection. The company was much concerned to observe that not only had the exports of India piece-goods fallen away, but also the imports of British piece-goods were increasing; it was not willing to maintain a branch of industry, which had ceased to be profitable, by arbitrary encouragements; but it was anxious that fiscal regulations should not rob any industry of the prosperity which it would otherwise enjoy, and accordingly directed the removal of the inland transit dues, which constituted an appreciable burden, inherited from long-past rulers of India, upon the indigenous production. It is true that this reform was not immediately carried out; but no dispassionate reader of the despatches can doubt that the directors were anxious for the prosperity of India as a whole, even to the point of sacrificing revenue (in spite of Mr. Dutt's assertion) for that object. It may also be noted, as Mr. Hamilton observes, that the decline of Indian piece-goods production was slower than is usually supposed. For many years after the piece-goods of Bengal and Madras had ceased to be exported to Europe, the heavy rate of freight enabled them to be exported in large quantities to various Eastern markets; and, as we know, the hand-loom industry is still far from extinct. Whether active fiscal intervention in its favour would have benefited India on the whole and in the long run is to the present writer an extremely uncertain matter.

The third large aspect of Mr. Hamilton's subject is the balance of trade and the alleged drain of specie resulting from it. The precise extent to which specie was actually remitted to Europe is unknown; that it has been greatly exaggerated by writers such as Mr. Digby and Mr. Dutt is undoubted. It was probably a spasmodic process, to which recourse was had in exceptional years, when neither the English, nor the foreign companies, would grant an adequate volume of bills on Europe. This matter is one that can be finally settled only by the patient examination of a large number of documents. Mr. Hamilton is certainly right in his contention that the existing evidence does not warrant any belief that the metallic drain was large or regular, and that a number of circumstances concur to suggest that the remittances thus made on private account were on the whole inconsiderable. But we doubt whether he allows quite enough weight to the popular belief as displayed by Shore and Grant, that such remittances were sometimes made on a considerable scale. The subject is one of interest, which we should like to see discussed in the light of more complete evidence than we have at present. Paul Benfield, it may be remembered, risked (and lost) his fortune in an attempt to establish a regular house of remittance between England and India—a predecessor of our modern exchange-banks. His failure, we believe, was due rather to the accidents of war than to any error essential to his scheme. If that is so, it seems to postulate much more than one single stream of remittances in one direction only.

In conclusion we may congratulate Mr. Hamilton on having so ably dealt with and analysed the existing information on a subject of such large interest; and we hope his work may lead to wider and deeper investigations, until we know what solid facts—as apart from inference and hypothesis—we really have to go upon. Meanwhile, when Mr. Hamilton's book goes to a second edition, as it well deserves to do, we may suggest that a revision of the more strictly historical portion would be an improvement. For instance modern research has abolished the fortune which Dupleix (in an endeavor to explain the origin of his own) said had been left him by his father; the Nawab of Arcot was not in the least pacified by Dupleix's offer to hand Madras over to him; nor did Clive ever depose Mir Jafar—that was left for lesser and meaner hands. These, of course, have no bearing on the general scope and purpose

of Mr. Hamilton's book; but trifles as they are, they seem to us a disfigurement of a valuable, interesting and stimulating volume.

H. DODWELL

India at the Death of Akbar—An Economic Study. BY W. H. MORELAND, C.S.I., C.I.E., Late of the Indian Civil Service. London: Macmillan & Co. 1920. pp. xi, 328. Price in England 12s. net.

With the publication of this work the study of the economic history of India enters on a new stage. It passes from the region of vague generalization and airy polemics to that of science. Mr. Moreland here attempts a critical study, based on *all* the available materials, of the economic condition of India in 1605, and turns the "dry light" of his analysis on all the factors of the economic situation,—the land, the people, the State, the weights, measures and currency, the consuming classes, agriculture, manufactures, transport and foreign trade,—and ends by formulating his conclusions as to the prevailing standard of living for the upper, middle and lower classes, then as compared with now, and the real amount and distribution of the fabled "wealth of India" under the Great Mughals.

The period 1605 has been well chosen. It is the dawn of the European connection with Northern India and the beginning of the orderly and civilised imperial rule which the Mughals maintained for centuries and, after a short sharp spasm of "anarchy," handed on to their British successors in empire.

To the serious student of Indian history the close of Akbar's reign is significant as the earliest period from which we possess detailed and accurate (though not complete) information of the nature of statistics,—while in the preceding epochs there are large gaps in our knowledge, or the records contain merely vague general assertions, "round numbers" and rough guesses on matters economic. As the century advances, the sources become fuller and more varied.

Mr. Moreland's preliminary task has been one of singular difficulty. At the outset he had to attempt to reduce to terms of the 20th century the statements and figures of men who thought and wrote in terms of the middle ages. Before he could get safe data for drawing his conclusions he had first to give precision, mathematical accuracy and uniform meaning to the language (or rather languages)

of writers living in an age when these qualities were unknown and in a country with wide variations of weights, measures and currency from province, to province and sometimes even from reign to reign in the same province. The enormous amount of labor involved in this spade work can be appreciated only by those who have tried to make a statistical survey of the Mughal empire, and I am sure future workers in the same field will be thankful to Mr. Moreland for having cleared their path and made their task easier in several respects. He has removed many ambiguities and corrected many popular errors as to the significance of old terms and the true state of India in 1605, where we are apt to apply the ideas of 20th century Europe without any suspicion of our being in the wrong.

The author's study is the more useful because his method is comparative. He is constantly harking back from his carefully sifted data of 1605 to the known facts of the same part of the world in our own days and thereby bringing the meaning of his researches home to the modern reader. Mr. Moreland's general conclusions are:—

- “(i) The upper classes were able to live much more luxuriously in the time of Akbar than now.
- (ii) The middle classes appear to have occupied more or less the same economic position as at present, but their members were proportionately much smaller.
- (iii) The lower classes lived even more hardly than they live now. We cannot be sure whether they had a little more or a little less to eat, but they probably had fewer clothes, and they were certainly worse off in regard to household utensils and to some of the minor conveniences and gratifications of life.” (pp. 294 and 279.)

Now, from the nature of the existing evidence it is impossible to quote chapter and verse in support of these opinions, and indeed any general opinions on Mughal India. They are necessarily based on the impressions left on the mind by a large number of detached facts, and are the result of piecing together small bits of information and inference derived from a variety of Persian official histories, European travellers' books, factory records, contemporary vernacular poems and tales, etc., From my own extensive reading in this class of sources, I agree in the main with Mr. Moreland's conclusions, though with certain modifications.

The lower classes had indeed fewer clothes than now. Though handloom weaving was almost universally practised throughout the country, its output was necessarily small, and a moderate sized cotton-mill of today produces more *dhotis* than a hundred thousand hand-looms. Moreover, cotton, and therefore yarn, were comparatively dearer in most parts of India in those days of no transport facilities. We have evidence that machine-made cloth is enabling our agricultural classes to clothe themselves more fully and easily in these days of higher grain prices than three centuries ago. But I am persuaded that the village population and town laborers alike in the Gangetic valley (as well as those of the Krishna and Godavari) at least were better fed in Akbar's time than now. No doubt, they lacked the resources which modern civilisation has given their descendants for combating a local famine with the surplus produce of distant places, and had not the same amount of garnered wealth for resisting famine as they now have in certain provinces. But in normal years they enjoyed the full advantages of Nature's lavish bounty in absence of export, the existence of many free pastures and water-courses from which they could add to their income (as the English village laborer used to do before the enclosures of the middle 18th century). Dairy products were cheaper purer, and distributed more widely and to a lower stratum of society even 50 years ago than now. Fish (which in Bengal is the most important item of food for all after rice and *before dal* or vegetables, and in other provinces is eaten by the numerous lower castes), was more plentiful and in many places could be had for nothing from the many neglected streams and tanks, like "the things of Nature." It has now become a luxury even for the middle class in our towns.

In fact, the population was sparse, and the lower classes benefited by reason of it. Life was also simpler for all; hence the vanquished in the struggle for existence,—the weak, the infirm, the unsuccessful in business,—did not find it so hard a world to live in as now. There were certainly greater colour and gaiety in life then, and that implied rude plenty in normal years. When *akal* (famine) or the great Mother (pestilence) desolated the land, there was no help for it; man bowed his head to divinity, but raised it after the storm had blown over. [Here I must warn the student

against accepting the picture of misery given in Mukunda Ram's poem *Chandi* as typical of 16th century Bengal, any more than the *Vision of William concerning Piers the Plowman* is universally true of 14th century England.]

The chief gain of the lower classes—and indeed of all classes,—in British India has been security of property and freedom of production and service. The wealth of the upper grades of our town laborers is now certainly greater and their standard of living higher than in 1605. But the lower grades of town laborers and peasants, even when richer in money, are no better off than in 1605, probably worse, as they have new wants to supply and live in an overcrowded bustling world that has no pity for the fallen of the industrial army.

There *was* a middle class in Akbar's India, though not so large or influential as now. It was composed partly of the hereditary (lower) *civil* service of the State,—the *amlas* of the revenue and accounts departments, without whom the Government could not go on, (as Aurangzib found to his cost, when he rashly ordered the removal of all Hindus from these posts), and partly of the small *zamindars* and village headmen, both in Northern and Southern India. The town traders and bankers, as well as the *military* officers of the Crown were subject to more violent fluctuations of fortune and could not constitute any permanent class in society. This is evident from the utter decline and final obscurity of the grandsons of even the highest nobles, so often illustrated in the *Biographical Dictionary of the Mughal Peerage* (*Masir-ul-umara*.)

When Mr. Moreland speaks of Akbar's higher officers as "consisting largely of foreigners" (pp. 69 and 279), the student has to bear a correction in his mind. These men were foreigners *by birth* no doubt, but they made India their home, and most of them broke the bridge for a return to their ancestral Iran or Turan. In Akbar's reign, (and the remark is even more true of the 17th century), whenever a Central Asian, Persian or Turkish soldier or minister came to India in search of fortune, he thereby banished himself for ever from his home land. There was the greatest rivalry between the Great Mughal and the rulers of Turan and Iran for several generations. Every adventurer coming from these countries to India was a deserter in the eyes of his native

king. Such men had usually given offence to their kings before leaving home (*vilayet*), and subsequently found the greatest difficulty in bringing to India their wives, sons and sons-in-law if left behind at home. Witness the cases of Ali Mardan Khan the Persian, and Husain Pasha (created Islam Khan by Aurangzib) the Turk. These refugees could not leave India; they bred and multiplied here, and therefore after one generation they ceased to be foreigners. Even the Mughal imperial family forgot its Central Asian origin. We have a significant anecdote in which a son of Aurangzib complains against an officer saying, "He is a rascal,—a Turk," and the Emperor replies with a smile "We too are Turks" (*Ma ham Atrak-em!*)

Mr. Moreland is right in combating the sweeping definition of *zamindars* as only farmers of the revenue. The term included a variety of classes. In the Persian histories it habitually designates ruling chiefs not high enough to be called Rajahs. Such men exercised full legal jurisdiction over their tenants, or more correctly, their subjects. Even when they lost this feudal *power* under a new dynasty or were absorbed in the expanding and levelling Mughal empire, they retained their property in the *land*. The *zamindar*, even in his capacity of a middleman collecting Government dues from the actual cultivators is not a product of the decadence of the Mughal empire nor a wilful violation of Akbar's system of direct revenue collection by paid servants of the crown. He is as old as the code of Manu, and even older. In fact, ancient states had not enough of trusty servants to collect the revenue directly from all parts of their territory; they had to come to terms with men of local influence—often the barons and even distant scions of the defeated dynasty,—to farm the revenue to them, and be satisfied with a lump sum from the contractor whose position naturally became hereditary. Todar Mal's system of survey and assessment of each field was an innovation, an exception to this time-honored system of revenue farming; and it prevailed only in the central and longest-settled provinces of the Mughal empire, while in the newly or ill-subdued provinces on the frontier—like Bengal, where the annual alluvium and diluvium made the record of rights and survey impossible,—the State had to collect through the *zamindar* if it was to get anything out of the land. The peasant in these

frontier parts, however, had in those days the same high value in his *zamindar's* eyes as (barring community of blood) the highland clansmen had in their chieftain's estimation. There have been cases of *zamindar's* defending themselves with the help of their tenantry,—both free and villein (*ghulam*), in East Bengal down to the last generation. Tenants in such a society could not have been treated like the Irish cottiers.

Akbar's system of "survey and settlement" went on extending throughout the 17th century, as will be clear from the areas of "surveyed land" (*zamin-i-paimuda*) for the different *subahs* given in my *India of Aurangzib: Statistics, Topography and Roads*, (published in 1901)

Mr. Moreland's contrast between then and now will tempt his readers to pass sentence on the old Government. But it would be unfair to judge of the 16th century by the standard of the 20th, and to expect in the India of Akbar the economic and political principles which were accepted in Europe only late in the 19th century. The greatest gifts of the British to India have been *political* directly and economic only in a secondary way. They are, security of property and personal freedom for the individual. These, even more than pure and convenient courts of justice, an efficient police, mechanical transport and uniform currency, have improved the economic condition of modern India. On the other hand, Mughal India was under an essentially military type of administration, and that too conducted by a nomad people. This political factor entirely dominated our economic situation in that age. The unspeakable degradation of the intellect and character of the subject people under nomadic rulers alone offers an adequate explanation of the real economic misery of this fabled land of gold in the age of Akbar. India even in the economic sphere has profited most from the political or non-economic effects of British rule—*viz.*, personal freedom, security of possessions and, above all, the spirit of progress which we owe to Western statesmen and educationists. These, and not a "return to the learning of Confucious," will enable India to compete with Europe in the production and enjoyment of wealth.

JUDANATH SARKAR

REVIEWS OF BOOKS

ENGLISH

Economics for To-day. By ALFRED MILNES. London and Toronto: J. M. Dent & Sons, Ltd. 1920. pp.256. Price in England 8s. 6d.

There is a host of text-books of economics; but in all of them their defects are more prominent than their merits. This being our opinion, it will be understood that it would require a book of exceptional originality to arouse our enthusiasm. *Economics for To-day* is intended to give an elementary view of the economic life of the people—primarily the English people; and this it does in a systematic manner. The introductory analysis in the first chapter gives us a graphic picture of the origin of the finished commodities with which the shops provide us, and of the evolution of economic life during the past one thousand years. The fundamental ideas and definitions in economics are introduced in the next two chapters; and then there is a description of the mechanism of exchange, followed by a very useful treatment of the law of demand price. The “demand price curves,” as the author correctly calls them instead of “demand curves,” are well drawn; but the supply price curve exhibiting the tendency to increasing return is crude, for it falls much too fast for a normal case and very nearly reaches the zero line. The treatment of distribution is disappointing, for the importance of marginal productivity in establishing the demand for each factor of production is not made clear. It is doubtful whether the author fully understands his Marshall, and whether he has read the works of Wicksteed and T. N. Carver. The book deals with modern problems of labor, and the figures used by way of illustration are well chosen.

How it all Fits Together—A Novice's Introduction to the Game of Life. BY LEONARD ALSTON, Litt. D. London and Toronto: J. M. Dent and Sons. 1920. pp.158. Price in England 4s. 6d. net.

This is a spirited attempt to portray the fundamental truths of economics for English readers in a picturesque and

attractive style. The book is not merely written in popular language: it is breezy and entertaining. The ideas are very clearly expressed; and, considering the wide field covered the amount of error conveyed owing the impossibility of stating the whole truth is surprisingly small. Chapter V, "The Board on which the Game is Played" is wholly admirable as a unique exposition of the theory of rent. It is written as "a Fragment of an Ancient Manuscript," and will not only bring enlightenment to the student, but many a smile to the grey-haired professor. We hope the author will have another inspiration and give us international trade, or currency and prices, in the same delightful vein.

Commercial Arithmetic and Accounts. BY H. H. GREEN and T. FRANKLIN. London: Macmillan and Co., Ltd. 1920. pp. xi, 337, xxxiv. Price in England 6s.

This is the best text-book we have seen on commercial arithmetic. It is practical and comprehensive, and the explanations are in most cases quite full enough to relieve the teacher of a good deal of work. Part I contains the elements of arithmetic and book-keeping; Part II deals with Accounts; Part III is advanced arithmetic—geometrical progression, compound interest and annuities, sinking funds, square and cube roots, and the use of logarithms. We think more attention should have been given to foreign exchanges, and to the construction and use of ready reckoning and calculating tables. The description of commercial documents and their uses (*e.g.*, cheques, bills of exchange, etc.) is very useful; but it is a pity that the authors when they come to the graphic presentation of statistics, which it is pleasing to find included, have drawn a diagram with a false base-line (p. 304). The book may be strongly recommended for use in India in commercial classes for diplomas. It would be very useful too if B. A. students in economics were made to work through most of this book; for it would give them a thorough grounding in many of the facts of which they are painfully ignorant, and would polish up their rather scanty knowledge of the arithmetic of percentages, exchange calculations and compound interest. We should welcome an Indian edition of this book with examples in rupee currency and using Indian measures of weight and area.

PRINCIPAL CONTENTS OF AMERICAN JOURNALS¹

THE JOURNAL OF POLITICAL ECONOMY

MARCH, 1919

Labor Administration in the Shipbuilding Industry during War Time: I, by P. H. DOUGLAS and F. E. WOLFE.
Food Control and Price-Fixing in Revolutionary France: II, by HENRY E. BOURNE.

APRIL, 1919

The Industrial Outlook, by H. L. REED.
The War Housing Program and its Future, by CURTICE N. HITCHCOCK.
Reconstruction and Natural Resources, by RAPHAEL ZON.

MAY, 1919

What shall we do with the Railroads? by JAMES D. MAGEE.
Farm Products and Cost Accounting, by H. J. DAVENPORT.
Labor Administration in the Shipbuilding Industry during the War: II, by P. H. DOUGLAS and F. E. WOLFE.

JUNE, 1919

The Work of the Wage-Adjustment Boards, by ALEXANDER M. BING.
The American Automatic Tool, by ERNEST F. LLOYD.
The Place of Agriculture in Modern Industrial Society: I, by EDWIN G. NOURSE.

JULY, 1919

The Webb Law, its Scope and Operation, by WILLIAM NOTZ.
Plant Administration of Labor, by PAUL H. DOUGLAS.
The Place of Agriculture in Modern Industrial Society: II, by EDWIN G. NOURSE.
Commercial Banking and Capital Formation, by MYRON W. WALKINS.

¹The Editor regrets that owing to the high cost of paper it has been necessary to reduce the size of this number of the Journal. It is only possible, therefore, to give the contents of those journals which are not generally accessible in India.

OCTOBER, 1919

- Problems of Budgetary Reform*, by HENRY C. ADAMS.
War-Time Industrial Employment of Women in the United States, by A. B. WOLFE and HELEN OLSON.
American Trade Unionism and the Standardization of Wages during the War, by GEORGE E. BARNETT.
War Finance and the Rice Level, by H. G. MOULTON.

NOVEMBER, 1919

- Intensive Industrial Training Under Government Auspices in War Time*, by A. B. WOLFE.
Accounting as an Administrative Aid, by J. O. MCKINSEY.
Will Prices Fall? by H. G. MOULTON.

DECEMBER, 1919

- The Management of Labor*, by SUMNER H. SLICHTER.
The Marine Worker's Affiliation of the Port of New York, by BENJAMIN M. SQUIRES.
An Assessment Roll for the Income Tax, by CARL C. PLEHN.

THE AMERICAN ECONOMIC REVIEW

MARCH, 1919

- The Procedure of Contemporary Railroad Reorganisation*, by ARTHUR S. DEWING.
The War-Tax Paradox, by H. J. DAVENPORT.
Price Fixing in a Competitive Industry: A Pioneer Case, by LEWIS H. HANEY.
The Federal Farm Loan System, by GEORGE E. PUTNAM.
Labor Turnover, by GEORGE J. EBERLE.

JUNE, 1919

- The Revenue Act of 1918*, by ROY G. and GLADYS C. BLAKEY.
Consideration of the Proposal to Stabilize the Unit of Money, by G. H. KNIBBS.
Rejoinder by Professor IRVING FISHER.
An American Standard of Value, by D. J. TINNES.
Agriculture in Early Latium, by TENNEY FRANK.
The Purpose Achieved by Railroad Reorganization, by ARTHUR S. DEWING.
Communication: Experimental Definitions, by D. J. TINNES.

SEPTEMBER, 1919

- Protection of Piece Rate*, by CHARLES W. MIXTER.
Organization, Distribution and Wages, by HERBERT FEIS.
Theories and Tests of Monopoly Control, by C. J. FOREMAN.
Statistics of Income, by EDWIN R. A. SELIGMAN.
Are Stock Dividends Income? by EDWIN R. A. SELIGMAN.

DECEMBER, 1919

- An Adventure in State Insurance*, by A. J. PILLSBURY.
Suppression and Non-Working of Patents, by F. L. VAUGHAN.
American Minimum Wage Laws at Work, by D. W. DOUGLAS.
The Cost of the War and How it was met, by E. R. A. SELIGMAN.
The Income Tax as Applied to Dividends, by CARL C. PLEHN.
Extent of Organisation in the Women's Garment Making Industries of New York, by HARRY BEST.

QUARTERLY JOURNAL OF ECONOMICS

FEBRUARY 1919

- Price-Fixing as seen by a Price-Fixer*, by F. W. TAUSSIG.
The Burden of War and Future Generations, by A. C. PIGOU.
Wage Theory and Theories, by H. J. DAVENPORT.
The Taxation of Luxuries and the Rate of Interest, by A. F. MCGOUN.
War Labor Policies and their Outcome in Peace, by L. B. WEHLE.
Four Labor Programs, by T. N. CARVER.

MAY, 1919

- The Relations of Recent Psychological Developments to Economic Theory*, by Z. CLARK DICKINSON.
Latin American Foreign Exchange and International Balances during the War, by JOHN H. WILLIAMS.
Positive Contributions of Scientific Management, by HENRY H. FARQUHAR.
Indebtedness of Principal Belligerents, by LOUIS ROSS GOTTLIB.
The Iron-Ore Problem of Lorraine, by ABRAHAM BERGLUND.

AUGUST, 1919

- Federal Operation of Railroads during the War*, By F. H. DIXON.
Normal Price as a Market Concept, By E. G. NOURSE.
On Stabilizing the Dollar, by EDWARD T. PETERS.
Government Control of Sugar during the war, by JOSHUA BERNHARDT.
 Also Review of WALSH's *The Climax of Civilisation, Socialism, and Feminism*.

NOVEMBER, 1919

- The Present and Future of the International Trade of the United States*, by F. W. TAUSSIG.
Railroad Valuation by the Interstate Commerce Commission: I, By HOMER B. VANDERBLUE.
British Industry and the American Embargo, by L. M. SEARS.
A Division among Theorists in their Analysis of Profits, By C. J. FOREMAN.
Price-Fixing and the Theory of Profit, by KEMPER SIMPSON.
Debts, Revenues and Expenditures, and Note circulation of the Principal Belligerents, by LOUIS ROSS GOTTLIEB.

**BALANCE OF THE GOLD STANDARD RESERVE IN INDIA AND IN
ENGLAND ON THE LAST DAY OF EACH MONTH**

Held in the following form	28th February 1919	31st March 1919	30th April 1919
	£	£	£
1. Gold in India ...	...	...	...
2. Cash placed by Sec. of state at short notice	6,014,480	6,015,672	6,054,761
3. British and Colonial securities (value as on 30th Sept., 1918) ...	18,857,102	29,729 505 (31st March 1919)	28,209,257
4. Securities since purcha- sed (at cost price)	10,649,168	<i>Nil</i>	1,822,015
TOTAL ...	35,520,700	35,745,177	36,086,038

**BALANCES HELD IN CASH IN THE GOVERNMENT CIVIL TREASURIES
AND AT CREDIT OF GOVERNMENT IN THE PRESIDENCY BANKS AND
THEIR BRANCHES—BANK RATES—EXCHANGE—SILVER, ETC.**

Year	28th February	31st March	30th April
	Rs.	Rs.	Rs.
1917 ...	19,59,87,000	22,94,41,000	24,72,64,000
1918 ...	25,18,88,000	22,91,95,000	17,50,00,000
1919 ...	19,19,24,000	25,84,76,000	21,67,66,000

	28th Feb. 1919	31st March 1919	30th April 1919
<i>Bank Rates</i>	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>
Bank of Bengal ...	7	6	6
Do. Bombay ...	7	6	6
Do. Madras ...	8	8	7
Do. England ...	5	5	5
<i>Exchange Rates</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. p.</i>
On Demand ...	1 6 $\frac{1}{32}$	1 6 $\frac{1}{32}$	1 6 $\frac{1}{32}$
Telegraphic Transfer ...	1 5 $\frac{31}{32}$	1 5 $\frac{31}{32}$	1 5 $\frac{31}{32}$
3 Months ...	1 6 $\frac{11}{32}$	1 6 $\frac{11}{32}$	1 6 $\frac{11}{32}$
6 Months' ...	1 6 $\frac{11}{32}$	1 6 $\frac{21}{32}$	1 6 $\frac{21}{32}$
Government paper (3½ p.c.)	78-14	70 to 70-2	70-14
Bar Silver in London ...	47½d	47½d	48½d

**BALANCE OF THE GOLD STANDARD RESERVE IN INDIA AND IN
ENGLAND ON THE LAST DAY OF EACH MONTH**

31st May 1919	30th June 1911	31st July 1911	31st August 1919	30th September 1919
£	£	£	£	£
...
6,000,080	6,014,842	6,016,604	148	188
27,886,902	26,812,421	26,652,225	26,652,225	36,444,219 (on 30th Sept. 1919)
2,232,370	3,408,457	3,591,631	9,789,204	...
36,119,352	36,235,720	36,260,460	36,436,582	36,444,407

**BALANCES HELD IN CASH IN THE GOVERNMENT CIVIL TREASURIES
AND AT CREDIT OF GOVERNMENT IN THE PRESIDENCY BANKS AND
THEIR BRANCHES—BANK RATES—EXCHANGE—SILVER, ETC.**

31st May	30th June	31st July	31st August	30th September
Rs	Rs.	Rs.	Rs.	Rs.
32,48,70,000	39,60,52,000	35,96,31,000	26,48,44,000	20,76,43,000
19,95,93,000	23,21,37,000	16,20,54,000	14,92,88,000	27,64,95,000
16,22,01,000	16,49,84,000	15,55,92,000	16,77,54,000	14,18,41,000
31st May 1919	30th June 1919	31st July 1919	31st August 1919	30th Sept. 1919
<i>per cent</i>	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>	<i>per cent</i>
6	5	5	5	5
6	5	5	5	5
7	6	6	6	6
5	5	5	5	5
<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
1 8 $\frac{1}{32}$	1 8 $\frac{1}{32}$	1 8 $\frac{1}{32}$	1 10 $\frac{1}{32}$	2 0 $\frac{5}{16}$
1 7 $\frac{31}{32}$	1 7 $\frac{31}{32}$	1 7 $\frac{31}{32}$	1 9 $\frac{31}{32}$	2 0 $\frac{1}{2}$
1 8 $\frac{3}{8}$	1 8 $\frac{3}{8}$	1 8 $\frac{3}{8}$	1 10 $\frac{7}{16}$	2 0 $\frac{1}{16}$
1 8 $\frac{11}{16}$	1 8 $\frac{11}{16}$	1 8 $\frac{11}{16}$	1 10 $\frac{13}{16}$	2 1 $\frac{5}{8}$
69-8 to 69-12	70 to 70-2	68-4 to 68-8	68-6 to 68-10	66-8
52 $\frac{1}{2}$ d	53 $\frac{1}{2}$ d	—d	58 $\frac{1}{2}$ d	62 $\frac{1}{2}$ d

BALANCE OF THE GOLD STANDARD RESERVE IN INDIA AND
IN ENGLAND ON THE LAST DAY OF EACH MONTH

Held in the following form	31st October 1919	30th November 1919	31st December 1919
	£	£	£
1. Gold in India ...	...	...	...
2. Cash placed by Sec. of state at short notice	82	27,093	989
3. British and Colonial Securities (value as on 30th Sept. 1918)	30,04,430	30,044,430	29,993,826
4. Securities since pur- chased (at cost price)	6,617,299	6,617,299	6,805,978
Total ...	36,661,811	36,688,822	36,800,778

BALANCES HELD IN CASH IN THE GOVERNMENT CIVIL TREASURIES
AND AT CREDIT OF GOVERNMENT IN THE PRESIDENCY BANKS AND
THEIR BRANCHES—BANK RATES—EXCHANGE—SILVER, ETC.

Year	31st October 1919	30th November 1919	31st December 1919
	Rs.	Rs.	Rs.
1917 ...	18,58,27,000	16,50,05,000	16,81,19,000
1918 ...	16,92,06,000	13,68,41,000	14,72,60,000
1919 ...	18,76,15,000	19,53,38,000	14,06,44,000
1920 ...	—	—	—
<i>Bank Rates</i>	31st October 1919 <i>per cent</i>	30th Nov. 1919 <i>per cent</i>	31st Dec. 1919 <i>per cent</i>
Bank of Bengal ...	5	5	5
Do. Bombay ...	5	5	5
Do. Madras ..	6	6	6
Do. England ...	5	6	6
<i>Exchange Rates</i>	<i>s. d.</i>	<i>s. d.</i>	<i>s. d.</i>
On Demand ...	2 0 $\frac{5}{16}$	2 3 $\frac{8}{16}$	2 4
Telegraphic Transfers ...	2 0 $\frac{1}{2}$	2 3 $\frac{1}{2}$	2 3 $\frac{5}{16}$
3 Months' ...	2 0 $\frac{13}{16}$	2 1 $\frac{12}{16}$	2 4 $\frac{3}{4}$
6 Months' ...	2 1 $\frac{3}{16}$	2 1 $\frac{3}{16}$	...
Government paper (3½ p.c.)	66-8 to 66-14	...	Market closed
Bar Silver in London ...	64½d	75½d	76½d

BALANCE OF THE GOLD STANDARD RESERVE IN INDIA AND
IN ENGLAND ON THE LAST DAY OF EACH MONTH

31st January 1920	29th February 1920	30th March 1920	30th April 1920	31st May 1920
£	£	£	£	£
...
196	911	551	3,469	140
29,905,982	15,813,904	36,843,616 on 31st March 1920	30,485,278	24,816,470
6,920,788	21,230,976	...	6,143,550	11,821,100
36,826,916	37,045,891	36,844,167	36,632,297	36,637,810

BALANCES HELD IN CASH IN THE GOVERNMENT CIVIL TREASURIES
AND AT CREDIT OF GOVERNMENT IN THE PRESIDENCY BANKS AND
THEIR BRANCHES—BANK RATES—EXCHANGE—SILVER, ETC.

31st January	29th February	30th March	30th April	31st May
Rs.	Rs.	Rs.	Rs.	Rs.
18,63,40,000	29,13,46,000	26,44,55,000	25,40,21,000	28,47,40,000
22,87,44,000				
15,75,96,000				
29,19,45,000				
31st Jan. 1920 per cent	29th Feb. 1920 per cent	31st March 1920 per cent	30th April 1920 per cent	31st May 1920 per cent
5	7	7	7	7
6	7	7	9	8
6	8	8	9	9
6	6	6	7	7
s. d.	s. d.	s. d.	s. d.	s. d.
Nominal	2 7 $\frac{5}{16}$	2 3 $\frac{7}{8}$	2 3	2 1 $\frac{3}{8}$
2 5 $\frac{1}{2}$	2 7 $\frac{1}{2}$	2 3 $\frac{1}{2}$	2 3 $\frac{3}{8}$	2 1 $\frac{1}{2}$
Nominal	2 8 $\frac{1}{2}$	2 4 $\frac{1}{2}$	2 4 $\frac{3}{8}$	2 3
Nominal	...	...	...	...
61-2	58-14	Rs. 59	59 $\frac{1}{2}$	59
82 $\frac{1}{2}$ d	82 $\frac{1}{2}$ d	71d	67d	57 $\frac{1}{2}$ d

**ABSTRACT OF THE ACCOUNTS OF THE DEPARTMENT OF ISSUE
OF PAPER CURRENCY, 1919-20**

—	28th February 1919	31st March 1919	30th April 1919
	Rs.	Rs.	Rs.
Total amount of notes in circulation ¹	1,53,60;31,281	1,53,46,47,790	1,54,41;39,870
Deduct ² ...	2,11;96,770	—	69,33,245
RESERVE			
Coin and Bullion ...			
<i>In India :—</i>			
Silver Coin ...	13,49;54,387	16,66,11,656	18,01,00,458
Gold coin and Bullion	18,14;10,472	17,86,99,120	14,55;45,581
Silver Bullion under coinage ...	10,16,67,581	15,69;11,722	16,72,51,510
<i>In England :—</i>			(In His Majesty's Dominions 1,50,00,000)
Gold coin and Bullion	12,35,865	12;35,865	(In transit between India, England and His Majesty's Dominion 1,50;00,000)
Silver Bullion held in the U.S.A. and in transit therefrom	10,97;78,185	5,04,05,185	2,85;12,685
Securities (at purchase price) :—			
Held in India ...	16,07;99,946	16,07,99,946	16,07,99,946
Held in England ...	82,49;88,075	82,49;84,296	82,49,96,115
Total Reserve ...	1,51,48;34,511	1,53,46;47,790	1,53,72,06,625
Deduct ³ ...	—	—	—
Net Total Reserve ...	1,51,48;34,511	1,53,46;47,790	1,53,72;06,625

¹ Figures to the left of the semi-colon indicate the number of *lakhs*.

² Deduct—Withdrawn from circulation by Foreign circles, and in course of remittance to circles of Issue.

³ Deduct—Amount due on Bills drawn by one circle on another.

ABSTRACT OF THE ACCOUNTS OF THE DEPARTMENT OF ISSUE
OF PAPER CURRENCY, 1919-20

31st May 1919	30th June 1919	31st July 1919	31st August 1919	30th September 1919
Rs.	Rs.	Rs.	Rs.	Rs.
1,55,17,62,830	1,62,76,31,044	1,67,11,50,898	1,68,92;27,675	1,71,86;34,708
—	—	—	—	—
19,60,51,041	23,54,66,891	28,49;13,618	31,48,01,798	34,94,88,930
16,10,97,415	17,69,15,024	19,13,25,410	19,26,24,693	18,44;51,078
19,38;18,583	20,94,54,583	20,91,14,139	19,50,85,940	16,62,25,797
—	—	—	[Gold Coin and Bullion in transit between India, England and His Majesty's Dominions]	[In His Majesty's Dominions 1,53,704]
[In transit between India, England and His Majesty's Dominions 1,50;00,000]	2,00,00,000	—	9,22,527	1,98;50,000 [In transit between India, England and His Majesty's Dominions 91,72,528]
16,07;99,946	16,07,99,946	16,07,99,946	16,07,99,946	17,02,99,946
82,49;95,845	82,49;94,600	82,49,97,780	82,49,92,831	82,49,92,725
1,55,17;62,830	1,62,76,31,044	1,67,11,50,898	1,68,92;27,675	1,71,86;34,708
—	—	—	—	—
1,55,17;62,830	1,62,76,31,044	1,67,11,50,898	1,68,92;27,675	1,71,86;34,708

ABSTRACT OF THE ACCOUNTS OF THE DEPARTMENT OF ISSUE
OF PAPER CURRENCY, 1919-20

	31st Oct. 1919	30th Nov. 1919	31st Dec. 1919
	Rs.	Rs.	Rs.
Total amount of notes in circulation ¹	1,75,29,05,072	1,79,66,93,800	1,82,91,09,837
<i>Deduct</i> ² ...	...	...	...
RESERVE			
Coin and Bullion ...			
<i>In India :—</i>			
Silver coin ...	35,58,76,818	32,84,15,679	29,64,27,148
Gold coin and Bullion	19,25,47,039	23,58,52,920	29,60,54,902
Silver Bullion under coinage ...	15,32,89,402	14,60,35,591	14,03,08,395
<i>In England :—</i>			
Gold coin and Bullion	...	51,00,000 [Gold Coin and Bullion in His Majesty's Dominions 48,00,000]	4,29,00,000
Silver Bullion held in the U.S.A. and in transit therefrom (Also Gold Coin)	5,57,42,611	4,60,00,000	92,00,000
	[In transit between India, England and His Majesty's Dominions]	[In transit between India, England and His Majesty's Dominions]	[In transit between India, England and His Majesty's Dominions]
Securities (at pur- chase price) :—	1,53,705	3,56,95,912	4,89,31,890
Held in India ...	17,02,95,551	17,02,99,946	17,02,99,946
Held in England ...	82,49,89,987	82,49,93,752	82,49,87,556
Total Reserve ...	1,75,29,05,072	1,79,66,93,800	1,82,91,09,837
<i>Deduct</i> ³ ...	—	—	—
Net Total Reserve ...	1,75,29,05,072	1,79,66,93,800	1,82,91,09,837

1 Figures to the left of the semi-colon indicate the number of lakhs.

2 Deduct—withdrawn from circulation by Foreign circles, and in course of remittance to circles of Issue.

3 Deduct—Amount due on Bills drawn by one circle on another.

ABSTRACT OF THE ACCOUNTS OF THE DEPARTMENT OF ISSUE
OF PAPER CURRENCY, 1919-20

31st January 1920	29th February 1920	31st March 1920	30th April 1920	31st May 1920
Rs.	Rs.	Rs.	Rs.	Rs.
1,85,14,79,265	1,83,02,75,995	1,74,52,45,960	1,70,78,88,958	1,66,91,81,442
—	—	—	—	—
28,38,82,036	29,84,81,612	33,21,91,696	33,80,84,076	37,09,97,108
35,10,13,825	41,29,89,956	44,36,53,445	45,37,53,803	42,85,69,142
11,94,48,663	9,13,72,227	6,63,25,959	5,56,51,932	4,26,54,951
3,36,32,669	—	—	—	—
[In His Majesty's Dominions 2,98,00,000]	—	—	—	—
—	—	—	—	—
[In transit between India, England and His Majesty's Dominions] 5,28,00,000	[In transit, etc.] 4,64,90,223	[In transit, etc.] 3,44,71,947	[In His Majesty's Dominions] 95,00,000	In transit, etc. 74,69,617
15,59,54,918	15,59,54,946	19,58,54,946	23,76,54,916	31,17,54,916
82,49,97,126	82,49,87,031	67,27,47,967	61,27,44,201	50,77,35,683
1,85,14,79,265	1,83,02,75,995	1,74,52,45,960	1,70,78,88,958	1,66,91,81,442
—	—	—	—	—
1,85,14,79,265	1,83,02,75,995	1,74,52,45,960	1,70,78,88,958	1,66,91,81,442

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- Patna College Chanakya Society, Ninth Annual Report. (1918-19.)* Kuntaline Press. Calcutta. 1920. pp. 123.
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